

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
HEARING ON WATER RIGHT APPLICATION OF THE EL SUR RANCH

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1           Are there any procedural items that any of the  
2 parties need to discuss?

3           Ms. Goldsmith.

4           MS. GOLDSMITH: In the last two days of hearings,  
5 it became clear I think to me and hopefully to the Board  
6 that there really are two aligned parties. There are the  
7 parties -- the parties advocating for the permit and the  
8 parties who are opposing it.

9           HEARING OFFICER DODUC: I think we were aware of  
10 that even before the hearing. But please continue.

11           MS. GOLDSMITH: I was aware of it. But what I  
12 was not truly aware of or appreciative of was the fact  
13 that when the opposing party puts on their witnesses and  
14 then El Sur Ranch has to do the first cross-examination,  
15 we really do not have the opportunity then to  
16 cross-examine on what essentially is friendly cross and  
17 then expansion of the direct that occurs when the aligned  
18 parties put on friendly cross of the witnesses.

19           I'd like to request that in the cross-examination  
20 of the witnesses from here on out that the parties who are  
21 aligned with the party who's putting on the witness do  
22 their cross first, so that El Sur Ranch has the  
23 opportunity, which is I think totally fair, to cross-exam  
24 on the bulk or the body of the testimony that's been  
25 provided in support of where in opposition to the

1 application.

2 HEARING OFFICER DODUC: Any opinions from the  
3 other parties?

4 Mr. Lazar.

5 MR. LAZAR: Good morning.

6 I understood the purpose of rebuttal testimony is  
7 to be having that capacity that was just described by Ms.  
8 Goldsmith. I understand that there are certain alignments  
9 with parties here that may be apparent, but that I don't  
10 think should be a factor in interrupting the order of the  
11 proceedings.

12 HEARING OFFICER DODUC: Ms. Goldsmith.

13 MS. GOLDSMITH: Yes. The opportunity for  
14 rebuttal is to rebut the direct testimony, not to rebut  
15 the friendly cross of parties to their direct testimony.  
16 So I would like to again suggest that for --

17 HEARING OFFICER DODUC: So, quite frankly, Ms.  
18 Goldsmith, your request is that El Sur Ranch be allowed to  
19 be the last to conduct cross-examination?

20 MS. GOLDSMITH: That's correct.

21 HEARING OFFICER DODUC: I will grant that  
22 request, Ms. Goldsmith.

23 MS. GOLDSMITH: Thank you.

24 HEARING OFFICER DODUC: Any other procedural  
25 issues?

1 All right. Then -- oh, please go ahead.

2 MS. FERRARI: I'm Chandra Ferrari with Fish and  
3 Game.

4 I'm just wondering if this is the appropriate  
5 time to bring up procedural questions about rebuttal, or  
6 would that be after the case in chiefs are done?

7 HEARING OFFICER DODUC: Go ahead and bring them  
8 up now.

9 MS. FERRARI: My request is that we may have a  
10 little time to prepare before we cross the rebuttal  
11 witnesses, given that we had no opportunity to see the  
12 testimony or have identification of the rebuttal  
13 witnesses. It was my understanding from talking with  
14 Water Board staff that traditionally that doesn't happen  
15 if the case in chiefs have not finished. So clearly today  
16 we'll be finishing the case in chiefs and then starting  
17 rebuttal, hopefully to finish this hearing today. So I  
18 just request that the Department be -- well, I guess all  
19 the parties be allowed a little time after the direct  
20 rebuttal testimony goes forward to prepare cross. So a  
21 brief break in the proceedings.

22 HEARING OFFICER DODUC: I'll take your request  
23 under advisement. We'll see how things play out today.  
24 And if it happens that it coincides with our lunch break,  
25 you could have a lunch break to do so.

1 MS. FERRARI: Thank you very much.

2 HEARING OFFICER DODUC: I will take that under  
3 advisement.

4 Two other announcements before we begin.

5 Ms. Goldsmith, something else?

6 MS. GOLDSMITH: Yes. In terms of the order of  
7 testimony this morning, and this is a personal request --  
8 I see that the boxes that are supposed to be coming from  
9 our office are not here. And unfortunately among those  
10 boxes is my material for cross of Mr. Dettman. And I'm  
11 wondering if we could therefore take the Carmel Steelhead  
12 and Lorri Lockwood's testimony before the CalSPA/CBD  
13 unless the boxes have arrived.

14 HEARING OFFICER DODUC: When do you expect your  
15 boxes to arrive?

16 MS. GOLDSMITH: I thought they would be here.

17 MS. TEETERS: Five minutes. They already left  
18 there.

19 HEARING OFFICER DODUC: Okay. Well, then let's  
20 proceed with the policy statements and that should take  
21 care of that.

22 MS. GOLDSMITH: Thank you.

23 HEARING OFFICER DODUC: You're asking for a lot  
24 today, Ms. Goldsmith.

25 We are broadcasting this hearing on the Internet

1 and recording it by both audio and video. So please come  
2 up and speak into the microphone as you are providing your  
3 comments or testimony. And please take a moment right now  
4 to check your cell phone, Blackberry, any noise-making  
5 device you have and make sure that it is on silent or  
6 vibrate.

7 And for those witnesses who have already taken  
8 the oath in this proceeding, I just remind you that you  
9 are still under oath if you are testifying today.

10 Are there any witnesses present today who plan to  
11 testify who have not already taken the oath? If you could  
12 please stand, please, and raise your right hand.

13 (Whereupon all prospective witnesses were sworn.)

14 HEARING OFFICER DODUC: Thank you. You may be  
15 seated.

16 All right. At this time, we will begin with the  
17 policy statements. I'll ask Mr. Motzel, if you're here --

18 MR. MOTZEL: Yes.

19 HEARING OFFICER DODUC: -- please come up and  
20 present your policy statement.

21 MR. MOTZEL: Well, first of all, good morning.  
22 And I'm here on my own behalf. I'm not representing  
23 anybody. I'm just a property owner in Big Sur that wants  
24 his voice heard. So I'll start now.

25 HEARING OFFICER DODUC: Mr. Motzel, if you

1 could -- thank you. Perfect.

2 MR. MOTZEL: Dear State Water Resources Control  
3 Board -- is that okay?

4 I hereby submit this policy statement regarding  
5 the position of the Motzel Trust with respect to the State  
6 Water Resource Control Board Application No. 30166, El Sur  
7 Ranch.

8 By education and trade, I am a landscape  
9 engineer. In addition, I am an ecologist and a gardener.  
10 I've worked in my profession for over 20 years in both  
11 Europe and the United States and have developed a keen eye  
12 and understanding of the Big Sur environment.

13 Since I moved to Big Sur in 1998, I have detected  
14 changes in the Big Sur valley that are not encouraging.  
15 There is less water in the river. The trees are dying due  
16 to several causes, and evasive species are threatening our  
17 unique ecosystem.

18 Moreover, native species such as Central Coast  
19 steelhead trout, the red-legged frog, and the Southwestern  
20 pond turtle, each of which is listed as threatened or  
21 endangered, are having a hard time to survive in this  
22 environment.

23 Finally, it is my understanding from the reviews  
24 of protests filed against the El Sur Ranch application  
25 that there may be also a seawater intrusion problem as a

1 result of a high volume of pumping on the El Sur Ranch?

2 I mention this to make clear that the Big Sur  
3 Valley is not in a good shape anymore. At issue with this  
4 application to appropriate water are enormous amounts of  
5 water to be used for alleged ranching purposes. The  
6 opinion of the EIR, supplied by the applicant, suggests  
7 little or no impact from the pumping of large quantities  
8 of water by the El Sur Ranch to either the Big Sur River  
9 or the Big Sur River delta.

10 Based on my education and experience, I am of the  
11 professional opinion that any kind of damage should be  
12 prevented before it occurs, even if it is small, as damage  
13 to the environment cannot always be reversed or corrected  
14 after it has occurred. We can try to help nature to find  
15 its way back to an equilibrium, but to fully repair harm  
16 to the environment is almost always impossible. That the  
17 EIR states that there will be little or no damage is not  
18 comforting at all. We need to prevent any damage to this  
19 unique part of nature.

20 Based upon my review of the applicable data,  
21 there is no reliable data about how much water really  
22 flows through this river. As all parties are aware, the  
23 California Department of Fish and Game is currently  
24 seeking to find out how much water is necessary to sustain  
25 existing fish population in the Big Sur River. The

1 Department of Fish and Game began a Big Sur River instream  
2 flow study site selection and transect location on  
3 September 15th, 2010.

4           This study will examine both the Molera and  
5 Campground Reaches of the Big Sur River, areas in which  
6 the El Sur Ranch well heads and surrounding habitat are  
7 located. Attached hereto - and you should have it all in  
8 your PDF file - hereto as Exhibit A is a true and correct  
9 copy of a June 2nd, 2010, letter from the Department of  
10 Fish and Game noticing the above referred to study.

11           It is therefore clear that the Department of Fish  
12 and Game has not finally quantified nor characterized  
13 south-central steelhead habitat as a function of flow in  
14 the Big Sur River using either modeling, hydrologic, or  
15 empirical methods. Such a development of habitat and flow  
16 relationships will also allow the Department of Fish and  
17 Game to identify the exact requirements needed to protect  
18 south-central steelhead in the Big Sur River.

19           Accordingly, any stream flow requirements in the  
20 El Sur Ranch EIR do not adequately address the  
21 necessity -- the necessary measures - sorry - to protect  
22 the critical habitat for threatened steelhead species and  
23 required by both the California Department of Fish and  
24 Game and the U.S. National Marine Fisheries Act.

25           Therefore, the State Water Resources Control

1 Board should not issue a permit on Application 30166 until  
2 such time as the California Department of Fish and Game  
3 has completed and analyzed its recent survey of the Big  
4 Sur River.

5 Applicant filed its application on June 7th,  
6 1992, 19 years ago to this day. The State Water Resources  
7 Control Board should issue a permit on Application 30166  
8 only after the Department of Fish and Game completes its  
9 current Big Sur River study and the study's findings can  
10 be incorporated into the decision issuing a permit on  
11 Application 30166 and its terms and conditions. Such a  
12 delay will prejudice no one.

13 HEARING OFFICER DODUC: Mr. Motzel, I hate to  
14 interrupt you. We allow five minutes for policy  
15 statements and your five minutes have come up. And we do  
16 have your full policy statement and it is in the record.  
17 There's really no need for you to read the entire nine  
18 pages. If you would like a few minutes just to wrap up,  
19 please do so.

20 MR. MOTZEL: The time flowed faster than I  
21 thought it would.

22 HEARING OFFICER DODUC: You did a good job. Two  
23 pages in five minutes.

24 MR. MOTZEL: The thing that just seems really  
25 strange to me, that we are talking about water for, you

1 know, raising cattle and everything, and we've not once  
2 mentioned, or not to my knowledge, what the El Sur Ranch  
3 can do for us people. Meaning, you know, these are huge  
4 amounts of water. And there might be some damage. So  
5 what is going to be done if there is damage done even if  
6 it is small? Are we going to get money or are we going to  
7 get compensation? Is our trade in Big Sur, meaning  
8 tourism, is it protected therefore? What happens if all  
9 of a sudden our tourists stay away because the river is  
10 gone? I'm thinking about the Carmel River scenarios.

11 So I'm, you know, very emotional about this, of  
12 course. And obviously everybody has my statements and  
13 have read them -- hopefully they have. So my concerns are  
14 issues mentioned, and thank you for your time.

15 HEARING OFFICER DODUC: Thank you very much, Mr.  
16 Motzel.

17 Mr. Cunningham, if you're here, please come up  
18 and provide your policy statement.

19 Mr. CUNNINGHAM: Thank you.

20 HEARING OFFICER DODUC: And we also have your  
21 policy statement in the record.

22 MR. CUNNINGHAM: Thank you.

23 Good morning, members of the Board. I would like  
24 to thank you for the opportunity to speak.

25 My name is Jim Cunningham, Sr., and I have lived

1 in Monterey, California, for 69 of my 74 years. I worked  
2 for Cortland Hill on the El Sur Ranch for three years as a  
3 telephone line repairman. I also worked for four years on  
4 what was then called the Dani Ranch before it became  
5 Molera State Park. I helped Bud Nelson, who leased the  
6 Dani Ranch, with his cattle operation, and also patrolled  
7 the ranch. I fished the Big Sur River for 60 years. I  
8 also hunted the Big Sur area, including Molera Ranch and  
9 the El Sur Ranch for 15 years. Because of this, I am very  
10 familiar with both sides of the Big Sur River and the El  
11 Sur Ranch.

12           These hearings are to determine if the El Sur  
13 Ranch should be granted further water rights from the Big  
14 Sur River. Why are we even considering granting further  
15 water rights from this river when it is designated a wild  
16 and scenic river and has several listed threatened species  
17 living in it, most notably steelhead? While all species  
18 are important, steelhead have a special place in the  
19 hearts and soles of many people. In the past, steelhead  
20 were economically important to the businesses of Big Sur.

21           Having fished the Big Sur for these many years, I  
22 will discuss the Big Sur both past and present. In the  
23 earlier years, I saw literally thousands of steelhead in  
24 the Big Sur, caught hundreds, 78 fish being the top year.  
25 Most yearly averages were between 40 and 60 fish. Those

1 years are long gone. Today, it is difficult to even see a  
2 steelhead, let alone catch one.

3           The steelhead run has always been and will always  
4 be greatly affected by both the amount and purity of the  
5 water. The amount of water or lack of does have  
6 devastating consequences on the steelhead population.

7           In the past, I fished occasionally during trout  
8 season. While trout season was from the first of May  
9 until the end of October, I only fished trout from August  
10 to the end of October. When I was fishing for trout, I  
11 caught steelhead, from a pound and a half to six. These  
12 were ripe mature fish ready to spawn. This period was  
13 from the '50s and through the '70s. During that period, I  
14 also landed an occasional silver salmon. I caught  
15 anywhere from 2 to 16 of these small steelhead during that  
16 period.

17           Once steelhead season opened in December, my  
18 fishing buddy and I would start fishing the lower river  
19 and lagoon. While trying to catch the adult fish, we  
20 would observe thousands of smolts flipping out of the  
21 water in the lagoon, only to move out to the ocean during  
22 the low tide and come back in during the incoming tide.  
23 In later years, we noticed the number of fish smolt  
24 diminish significantly. Unfortunately, this decline  
25 continues today.

1           The present. On Monday, July 4th, 2011, I  
2 visited the Big Sur. I walked the lower part of the river  
3 to the lagoon. On this day, I wanted to see what the  
4 water conditions were. I was very distraught at what the  
5 river looked like now compared to what it looked like in  
6 earlier years. I was even more distraught considering  
7 this was an above-average rainfall year, yet you could  
8 walk across a very shallow river. You used to either have  
9 hip boots or waders to across the river then. Now, the  
10 deepest point was ten inches.

11           I also wanted to see if I could find young  
12 juvenile steelhead. I spent three hours walking most of  
13 the lagoon and even tossed rocks into the deeper parts in  
14 an attempt to see moving fish.

15           I also walked the north side of the lagoon along  
16 the willows to look into the deeper parts. Where I once  
17 would have seen hundreds, I saw only five or six  
18 juveniles.

19           After going home, the lack of both water flow and  
20 juveniles really upset me. I had a friend check the USGS  
21 gauge at the Big Sur Gorge and found out that the flow is  
22 around 58 cfs that particular day. At 58 cfs, the flow  
23 would be high enough to fish for steelhead if the season  
24 were open. However, the river was only ten and a half  
25 feet wide, varying anywhere from depths of a half inch to

1 nine inches. The steelhead season was open. You could  
2 fish this flow of water. But the flow was too low to  
3 protect from predation.

4           During my time working on the El Sur Ranch and  
5 the Dani Ranch, hunting on both ranches and fishing the  
6 Big Sur, I plainly saw the operation of the El Sur Ranch.  
7 All that time I did not see the operation of the cattle  
8 ranch or the permanent pasture change appreciably. During  
9 the 60 years of observations, I have not seen the El Sur  
10 cattle operation change in numbers or procedures. With or  
11 without this permanent pasture, the limiting factor in my  
12 opinion on the El Sur Ranch is not the summer pasture but  
13 the wintering pasture. And this will not increase no  
14 matter how much watering you're doing in a, "summer  
15 pasture." I've never seen the El Sur Ranch do anything  
16 with a permanent pasture other than that of water it and  
17 running cows in it. I've never seen it mowed or harvested  
18 or reseeded.

19           Members of the Board, your decision in this  
20 matter could affect the fish of the Big Sur for years to  
21 come. Again, this is always about water or lack of it.  
22 In my humble opinion, the continued drawdown of the Big  
23 Sur River will guarantee the extinction of steelhead.

24           I simply see it this way: This is nothing more  
25 than a power grab for water from the Big Sur River that

1 has its time correctly affected with depth of the lagoon.  
2 I say that because in my summer fishing I would observe  
3 the level of the lagoon fluctuate and could be more --  
4 that could not be accounted for by tidal action. All of  
5 these fluctuations were at times you could hear the pumps  
6 running.

7 I would hope the decision this Board makes would  
8 not further affect the beauty of the area, special nature  
9 of Big Sur, or the precious native run of steelhead. This  
10 Board has the power and the responsibility to render a  
11 decision that preserves all of the public resources and  
12 not just the economic importance of one landowner.

13 HEARING OFFICER DODUC: Thank you.

14 MR. CUNNINGHAM: Thank you very much.

15 HEARING OFFICER DODUC: At this time we will  
16 proceed with the case in chief for the Center for  
17 Biological Diversity, the California Sportfishing  
18 Protection Alliance, and Ventana Wilderness.

19 Mr. Lazar, you may begin.

20 MR. LAZAR: Good morning, members of the Board.  
21 My name is Adam Lazar. And I am a staff attorney with the  
22 Center for Biological Diversity. I'm here today on behalf  
23 of the California Sportfishing Protection Alliance, one of  
24 the protesters in this matter; as well as the Ventana  
25 Wilderness Alliance and the Center itself.

1           The executive director of Ventana Wilderness  
2 Alliance earlier provided a policy statement which  
3 summarized I think quite well the reasons why we're here  
4 today.

5           These environmental groups are involved for just  
6 one reason, which is to protect the Big Sur River, its  
7 habitat, and its diverse species. As Tom Hopkins  
8 testified in his policy statement, Big Sur is a household  
9 name. It is a marquee natural wonder for the state and  
10 should be preserved.

11           Now, the Board knows that under the law there are  
12 two basic limits to appropriative water right. Those  
13 limits are, first, whether the water is available, both  
14 technically available and subject to environmental  
15 conditions; and, second, whether that water will be  
16 beneficially and reasonably used and not wasted.

17           We're concerned for both of these reasons.  
18 First, we believe that the water rights application even  
19 as currently proposed after the fourth revisions on June  
20 16th and 17th will allow the applicant to withdraw more  
21 water than is available to support habitat. If the river  
22 has been dewatered, then the threatened Central Coast  
23 steelhead in the river will not survive. Even if the  
24 river is not dewatered, the river could still lose its  
25 status as one of the last remaining viable steelhead runs

1 on the coast.

2           Now, this is sort of like, if viable steelhead  
3 runs are cookies in a cookie jar and there's one cookie  
4 left in the jar, we're sitting here arguing over the size  
5 of that cookie right now. But it seems to me like the  
6 approach here should not be "Aha, let's take the last  
7 cookie." The approach should be to try to preserve that  
8 cookie, if indeed you can compare the two.

9           The Water Board is conducting a hearing today  
10 which, after a decade of protest, numerous studies, plenty  
11 of arguments back and forth, we're still missing key  
12 pieces of information. We're faced with the new reports  
13 and yet we're still missing the flow study conducted by  
14 CDFG and we're still missing a public trust resources  
15 analysis. The Board would be well advised to wait on  
16 issuing a permit until both of these pieces of information  
17 are available.

18           In conducting this hearing, despite lacking this  
19 information, the Board guarantees they are prolonging this  
20 process, either through requiring follow-up when this  
21 information is available or by risking litigation due to  
22 this information not being considered. Without this  
23 information, we are working off of a limited science that  
24 is available and the legal requirement to protect public  
25 trust resources.

1           Given what we know, there are three key problems  
2 with this application. First, the requested diversions  
3 will harm public trust resources. Second, the requested  
4 diversion will not be beneficially and reasonably used.  
5 And, third, the Environmental Impact Report does not  
6 account for impacts caused by the diversion but only for  
7 the small fraction requested above a base line which  
8 itself is a hypothetical figure, not actually based on  
9 historical use.

10           Brian Johnson of Trout Unlimited already  
11 testified to the issues involved in the Environmental  
12 Impact Report. Chris Shutes this morning will provide  
13 testimony on the need from policy perspective and from an  
14 evidentiary perspective to protect the public trust. And  
15 Dave Dettman will be speaking to the biological issues  
16 this morning.

17           The beneficial use question here is a tricky one  
18 because it's closely related to public trust. It is  
19 important to note how closely these concepts are tied. On  
20 the one hand, the efficiency and effectiveness of the  
21 water is certainly a condition of beneficial use, as the  
22 Water Board itself has explained in such decisions as  
23 Water Right Decision 1600, and subsequently affirmed by  
24 the Court of Appeals in the Imperial Irrigation District  
25 cases.

1           This aspect of reasonable and beneficial use was  
2 again emphasized recently by the Board's own delta water  
3 master, Craig Wilson, in his December 2010 report on  
4 reasonable use and agricultural efficiency. In that  
5 report the water master strongly advocates for efficiency  
6 considerations tied to beneficial use.

7           And we have heard testimony whether or not water  
8 can be used efficiently. We have heard that the requested  
9 diversion requires year-round flood irrigation or, as the  
10 applicant says, this gravity feed in an area with abundant  
11 amount of rain. It would seem that the use is not,  
12 despite the applicant's abundant testimony to the  
13 contrary, efficiently used.

14           But there are other considerations beyond  
15 efficiency considering beneficial use that have to do with  
16 the availability of the water itself. To quote a case,  
17 Tulare Irrigation District versus Lindsay Strathmore  
18 Irrigation District - that's 3 Cal 2nd 489 - what may be a  
19 reasonable beneficial use for water that's present in  
20 excess of all needs would not be a reasonable beneficial  
21 use in an area of great scarcity and great need.

22           So first we must ask if scarcity or need for this  
23 water is an aspect here of beneficial and reasonable use.  
24 In other words, whether there is water available is  
25 another aspect of the same question.

1           The applicant has attempted to reframe this issue  
2 over public trust protection by claiming their diversions  
3 do not impact the river. However, Mr. Custis' testimony  
4 by DFG makes clear that only a fraction of the overall  
5 impacts of the pumping was actually measured on the river.  
6 Given the potential for pumping to have very significant  
7 effects on the flows, the public trust protections should  
8 be made of paramount concern.

9           The testimony of Dr. Titus, as confirmed by our  
10 own expert David Dettman, demonstrates and will  
11 demonstrate that there is not water available for  
12 diversion during summer months while also protecting  
13 public trust resources. To make water available for  
14 appropriation while protecting public trust resources, the  
15 minimum bypass flows must be set by the Board that will  
16 protect these resources.

17           While it is commendable that the applicant has  
18 now made an effort to recommend bypass flows, these  
19 proposed flows are still not protective and allow the  
20 applicant to somehow either use dissolved oxygen to  
21 substitute or stand out there and prove somehow that fish  
22 passage is still possible as alternatives.

23           The applicant also reserves itself the right to  
24 oxygenate the stream in lieu of a bypass flow. But if  
25 there is insufficient habitat, what is the good of

1 oxygenating it? In other words, the applicant's  
2 last-minute attempt here is not a real bypass flow and  
3 certainly not protective.

4 DFG's recommendations are protective and Mr.  
5 Dettman's recommendations developed independently of the  
6 Fish and Game Department are also protective.

7 There should be other considerations at play here  
8 when considering the use of public trust resources. Cases  
9 such as Autobahn (phonetic) made clear that a balance must  
10 be struck by the Board between the harm to the public  
11 trust and the benefit that could be produced by that harm.  
12 Cases such as Autobahn make clear that the public trust  
13 should also be protected even when a strong social benefit  
14 exists.

15 What then is the social benefit here? To support  
16 one man's hobby farm or perhaps the future source of  
17 bottled water? It is immaterial here that finding other  
18 means to support the farm would be more expensive. The  
19 ranch does not make money and was never intended to.

20 But let's look at it another way. How does harm  
21 to the public trust weigh against the need for water, that  
22 is, the need for summer watering of pasture, given the  
23 relative ease to feed with hay, as many farms without the  
24 luxury of flood irrigation do?

25 Cases such as Autobahn had to weigh de-watering

1 of Mono Lake against providing drinking water to the city  
2 of Los Angeles.

3           Those are some serious balances to be weighed  
4 there. But there is no such weighting and just public  
5 service being requested here. Even when water is  
6 requested for domestic use, the Water Board still acted to  
7 protect the public trust.

8           Given the equities at stake here, even in the  
9 absence of CDFG's forthcoming studies, the Board should  
10 err in favor of public trust protections and institute  
11 stringent flow requirements. Mr. Shutes will speak next  
12 to the policy behind me for such a decision.

13           Thank you.

14           I'd now like to present to you direct testimony  
15 of Chris Shutes.

16           HEARING OFFICER DODUC: Is Mr. Shutes your only  
17 witness?

18           MR. LAZAR: I have two witnesses.

19           HEARING OFFICER DODUC: Why don't you bring both  
20 of them up as a panel.

21           MR. LAZAR: Okay.

22           Mr. Lindsay, Mr. Shutes has a slide show for his  
23 presentation.

24           MR. SHUTES: We're not ready for it yet.

25           MR. LAZAR: Mr. Shutes, do you have the ability

1 to move the slides forward there?

2 MR. SHUTES: There is only four. I think I can  
3 ask Mr. Lindsay to move them. That would be fine.

4 MR. LAZAR: Okay. Great.

5 DIRECT EXAMINATION

6 BY MR. LAZAR:

7 Q Mr. Shutes, have you prepared testimony to present  
8 today?

9 A I have.

10 Q Would you like to present a summary of that testimony?

11 A I would.

12 Prior to that, I would like to note that there  
13 was an error in my written testimony on page 2. Is this  
14 the appropriate time to address that?

15 In line 25, the "gage" is misidentified. It  
16 reads USGS Gage 11143010. It should read USGS Gage  
17 11143000.

18 Good morning. My name is Chris Shutes. I'm the  
19 FERC projects director and water rights advocate for the  
20 California Sportfishing Protection Alliance. I'll briefly  
21 summarize my testimony, and then we will turn to the  
22 testimony of our expert biologist, Mr. Dettman.

23 The purpose of my testimony is to provide context  
24 and call attention to key facts and criteria by which the  
25 State Board should consider and criteria which it should

1 use in deciding how to address Application 30166 of the El  
2 Sur Ranch.

3           There is considerable uncertainty about water  
4 availability in the Big Sur River. This uncertainty stems  
5 from several unusual circumstances that pertain to the El  
6 Sur Ranch diversion. Among these unusual circumstances  
7 are:

8           Diversion from subterranean flow;

9           There is no gauging of the river near the point  
10 of diversion at this time with a calibrated and accepted  
11 USGS gage;

12           Diversions by other parties and natural losses  
13 upstream of the applicant's diversion are not known;

14           There is a time lag between operation of the  
15 applicant's pumps and effects on subterranean surface  
16 flow;

17           And the effects on the lagoon from underground  
18 pumping are difficult to evaluate.

19           Additional uncertainty stems from the fact that  
20 the effects on steelhead from the applicant's decades of  
21 burdens are not known. This is a fundamental flaw in the  
22 EIR which was done for this application. It can only  
23 partially be corrected by a public trust resources  
24 analysis. However, the Board to date has not conducted  
25 such an analysis.

1           It is essential for the Board to account for the  
2 uncertainty created by this ensemble of circumstance by  
3 requiring instream flows in the Big Sur River that, with a  
4 high degree of certainty, will protect both senior  
5 diverters and the river's public trust resources. The  
6 Board's first duty is to set minimum stream flow  
7 requirements that protect the public trust resources.

8           Legally and physically flow under the surface of  
9 the Big Sur River and surface flow on the river are part  
10 of the same flow. Whenever surface flows are insufficient  
11 to protect public trust resources, no diversions from the  
12 subterranean flow should be allowed, no matter how small  
13 the increment of change underground pumping may cause in  
14 the surface flow.

15           The Board should allow the Department of Fish and  
16 Game to complete the instream flow study that is currently  
17 underway before setting final minimum instream flow  
18 requirements should a permit be granted. And should a  
19 permit be granted prior to the completion of that flow  
20 study, the Board should establish a clear process to  
21 revisit the flow requirements once the study has been  
22 published.

23           The effects of the applicant's pumping on the Big  
24 Sur River that have been analyzed by consultants for the  
25 applicant seem to focus attention on whether direct





1 requirements; and a clear, established process by the  
2 Board to revisit instream flow requirements once the DFG  
3 flow study has been completed.

4 We recommend limitation of diversions to conform  
5 to the maximum diversions for beneficial use for  
6 uncultivated crops, Water Code Section 1004.

7 The next slide please.

8 --o0o--

9 MR. SHUTES: Implementation of best management  
10 practices. I think we've heard -- well, it's clear from  
11 some of the direct testimony of the applicant, and we've  
12 also heard in subsequent oral testimony, that there's some  
13 opportunities to increase the fishing season of water use  
14 on the farm. And that should be required as permit terms.

15 We request prohibition of additions to place of  
16 use, purpose of use, and we also -- number ten, next  
17 please.

18 --o0o--

19 MR. SHUTES: We also request prohibition of  
20 transfer of permitted water.

21 We believe a long-term monitoring program for the  
22 Big Sur River should be required as a permit term of the  
23 biota at least downstream of Highway 1.

24 And this I think needs to be put together in  
25 consultation with DFG and probably the National Marine

1 Fishery Service. Whether you could actually monitor  
2 downstream of Highway 1 and not also monitor upstream and  
3 draw adequate sites to the conclusions is something that I  
4 think needs to be discussed by the expert scientists.

5 We recommend the standard permit terms, expedited  
6 investigation enforcement for any waste or unreasonable  
7 use historically by the applicant, and coordination with  
8 DFG regarding the need for a streambed alteration  
9 agreement.

10 That concludes my testimony.

11 MR. LAZAR: I'd now like to present the testimony  
12 of David Dettman.

13 Thank you.

14 DIRECT EXAMINATION

15 BY MR. LAZAR:

16 Q Good morning, Mr. Dettman.

17 A Good morning.

18 Before we start, I would like to be able to  
19 control these slides. I have 13 of them.

20 MR. LAZAR: Mr. Lindsay, I think it will be clear  
21 which ones are his.

22 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
23 I got it.

24 MR. LAZAR: Okay. Thank you.

25 Let's take a second to put those up.

1 Q Good morning, Mr. Dettman. Please state your name.

2 A Good morning. My name is David Henry Dettman. I live  
3 at 655 Pedro Avenue in Ben Lomond, California. It's two  
4 words, B-e-n L-o-m-o-n-d.

5 Q Now, you've been asked by California Sportfishing  
6 Protection Alliance/Center for Biological  
7 Diversity/Ventana Wilderness Alliance to provide an expert  
8 opinion in this matter.

9 Can you describe what you were asked to do?

10 A Yes. These organizations asked me to provide an  
11 expert opinion on the status of the biological resources  
12 in the Big Sur River, particularly the south-central  
13 California steelhead population, and to evaluate the  
14 impacts to those resources from the proposed diversions of  
15 El Sur Ranch.

16 Q And did we also ask you to evaluate the proposed  
17 bypass flows of DFG and to see if you agreed or disagreed  
18 with those?

19 A Yes, you did.

20 Q And did we also ask you to, in consideration of the  
21 proposed diversions, if you determined that bypass flows  
22 would be protective, to proposal your own set of bypass  
23 flows?

24 A Yes, that's correct.

25 Q Thank you.

1           And do you believe you're qualified to provide  
2 such an opinion?

3 A     Yes, I do. I've been working in fisheries biology for  
4 over 30 years, and for the last 17 years I was employed as  
5 the senior fisheries biologist for the Monterey Peninsula  
6 Water Management District, in charge of their program to  
7 try to keep steelhead extant in the Carmel River.

8 Q     So in other words you worked on the relationship  
9 between the fish and the flows in the river?

10 A    That's correct. During my employment, I provided  
11 biological assessments, flow studies, and habitat models  
12 for steelhead in the Carmel River and other streams and  
13 examined the effects of the proposed water developments on  
14 fisheries resources in California in steelhead and salmon  
15 streams. And this includes work in Lagunitas Creek in  
16 Marin County; the Zayante Creek and San Lorenzo River and  
17 Soquel Creek in Santa Cruz County; the Carmel River and  
18 its tributaries, the Arroyo Seco River, and the Salinas  
19 River in the Monterey County area. And I also worked  
20 during the '80s for the Department of Water Resources on  
21 their examination of flows necessary for salmon in the  
22 American, Feather and the Sacramento Basin. I testified  
23 on those topics at various hearings.

24 Q    And so given that experience, do you have specific  
25 experience then evaluating impacts of steelhead?

1 A Yes. I began studying steelhead populations in 1979.  
2 And since that time I've developed a keen understanding of  
3 the factors that are responsible for limiting populations  
4 in many California -- central California streams, most  
5 notably the Carmel River in Monterey County, because I  
6 worked there for a long period of time; and then most  
7 recently in Alameda Creek in Alameda County.

8 Q Thank you, Mr. Dettman.

9 Now, Mr. Dettman, I'd like to talk for a little  
10 bit about public trust resources. Let's talk about the  
11 biological resources in that locality, which is the study  
12 area here.

13 What are the most important and/or unique  
14 biological resources of the area in and around the Big Sur  
15 River around the proposed diversion?

16 A The biological resources are abundant. And there's  
17 been testimony on this.

18 --o0o--

19 MR. DETTMAN: But I want to point out the 1999  
20 PBS&J developed a list of sensitive species - this is the  
21 list that they came up with - a species that are  
22 sensitive, that is, not necessarily threatened or  
23 endangered but could be affected by operation of the water  
24 diversion or development in the area. And these included  
25 the California condor, the Monterey dusky-footed woodrat,

1 the Southern sea otter, the south-central California  
2 steelhead, the California red-legged frog, the Western  
3 snowy plover, Smith's blue butterfly, the loggerhead  
4 shrike, yellow warbler, the brown pelican, and also 33  
5 different sensitive plant species. And I will admit that  
6 I'm not an expert on these plant species.

7           And I think that -- the point here is that it's  
8 very clear from all the evidence that's been gathered on  
9 these species that this is one of the most scenic and  
10 treasured areas for preserving biological diversity.

11 BY MR. LAZAR:

12 Q     Now, we've already heard testimony from Dr. Robert  
13 Titus on the subject of threatened steelhead in the Big  
14 Sur River. Did you have an opportunity to review Dr.  
15 Titus' testimony?

16 A     Yes, I did.

17 Q     And were there particular points you wanted to  
18 highlight in Dr. Titus' finding.

19 A     Yes, in particular Titus, et al. -- Erman and Snider,  
20 reviewed the available biological information at the time  
21 when they put out their report. And at that time, it was  
22 clear that the entire area from the lagoon to the gorge  
23 remained a highly functional steelhead production area and  
24 often produced steelhead smolts in one year, which is an  
25 important characteristic in these coastal streams where

1 oftentimes flows are so limiting that it takes several  
2 years to produce one fish of any considerable size. So  
3 it's important here because the Big Sur River is capable  
4 of doing that in one year.

5           However, despite that characterization of the  
6 stream being highly functional, it appeared that there are  
7 problems with stream habitats in the lower, say, mile  
8 section of the stream within the Andrew Molera State Park.  
9 And these problems include poor juvenile production  
10 currently, low dissolved oxygen, and high temperatures.  
11 Although the high temperatures are not lethal, they are a  
12 factor that controls metabolism and negatively affects  
13 growth when food supplies are limited.

14           And then, importantly, the hydraulic connection  
15 between the river and the ocean at times seems to be  
16 blocked by lack of flow.

17 Q     Now, you mentioned there a moment ago about the  
18 production of juvenile steelhead. Have there been any  
19 recent studies showing a decline in the number of  
20 steelhead in the Big Sur River?

21 A     Yes. There was a review done in 2008 by the Center  
22 for Ecosystem Management and Restoration, and they noted  
23 that the Big Sur River, although it currently maintained a  
24 run of adult anadromous fish, and it was supported by  
25 natural production, there was evidence that there existed

1 a significant decline in abundance during the last  
2 ten years.

3 Q Have there been any other studies regarding the  
4 location of the steelhead in the Big Sur River as related  
5 to flow outside the scope of this process?

6 A Yes. Denise Duffy and Associates conducted a study  
7 that was designed to primarily look at restoring the  
8 riparian vegetation on the Creamery Meadow. But in doing  
9 that, they did some really good observational work with  
10 snorkeling, and did snorkeling all the way from basically  
11 the lagoon up to and through and including the Pfeiffer  
12 Big Sur River.

13 Q What conclusions did that study make?

14 A Basically they found that in riffles and runs with  
15 overhanging vegetation and woody material, there were  
16 large numbers of juvenile steelhead. This is an indicator  
17 of what the fish need. And then there were also large --  
18 larger juveniles were congregated at the heads of pools  
19 adjacent to cover. And this is typical area where these  
20 large fish hang out and eat. Basically the riffles supply  
21 them with food, and they exert very little energy while  
22 consuming food. That's one of their strategies.

23 And then the deep pockets and fast water in the  
24 stream were associated with increased numbers of larger  
25 juveniles occupying those areas.

1 Q Now, did you have the opportunity to visit the stream  
2 yourself?

3 A Yes, I did. I did not conduct snorkeling surveys or  
4 view the stream at low flows. I wasn't given an  
5 opportunity. But the general pattern of habitat units  
6 that I saw and the large amounts of overhanging vegetation  
7 and wood debris and the deep pockets that I saw are  
8 consistent with Denise Duffy's observations.

9 Q Thank you.

10 Now, your written testimony and that of Dr. Titus  
11 both describe the lagoon at the mouth of the Big Sur River  
12 as especially important for protection of the steelhead  
13 and other public trust resources. Can you explain why?

14 --o0o--

15 MR. DETTMAN: The physical and spatial habitat of  
16 the lagoon is generally good to excellent for juvenile and  
17 adult steelhead. And this has been indexed by the  
18 population data that was collected by Hanson in 2005 and  
19 2008. Or the study reports. I confuse sometimes the  
20 year. It's 2004 and 2007, the actual study years.

21 There is a general agreement about the importance  
22 of these lagoon environments throughout central  
23 California. But in the Big Sur, it's importance is  
24 highlighted because there's a relatively short reach of  
25 the stream that's available for anadromous fish. So that

1 means that the lagoon itself is relatively more important  
2 in this stream than in other streams, for example, like  
3 the Carmel River where there's 60 miles of stream for fish  
4 to access. That's not to diminish the importance of the  
5 lagoon environment in the Carmel. They're all important.  
6 But my point is in the Big Sur it's probably more  
7 important relative to steelhead.

8           The lagoon is a unique coastal public trust  
9 resource in that it regularly maintains a surface  
10 connection with the ocean throughout most of the year.  
11 This is very unusual in central California now. Most of  
12 the streams have bars that block the outflow during the  
13 summertime. That's partially a natural phenomenon, but  
14 it's also definitely affected by current water production  
15 in many of these coastal basins, which are high enough to  
16 basically reduce the outflows to the point where the ocean  
17 wins in that game of whether the lagoon mouth is -- the  
18 river mouth's open or closed.

19 BY MR. LAZAR:

20 Q     So you obviously spent some effort there describing  
21 the impact of the ability to open and close the mouth  
22 there. Why is that surface water connection important?

23 A     This is critically important in conserving and  
24 restoring steelhead runs, in my opinion, especially within  
25 the south-central region, because the Big Sur population

1 is still able to utilize that connection between the ocean  
2 and fresh water throughout most of the year, unlike other  
3 streams in the region. But this connection functions to  
4 maintain the life history variability and serves as a way  
5 to provide a pool of genetic material so that other  
6 streams when they eventually are restored these fish can  
7 either be directly transported or you can rely upon  
8 natural recruitment and strain from the Big Sur River to  
9 populate those streams.

10 Q So would you say then that the lagoon flow and its  
11 closure to the ocean is threatened by the proposed  
12 diversion?

13 A Possibly. The draft EIR and the Hanson 2008 report  
14 documented the closure of the lagoon as a really complex  
15 function related to tides, inflow, beach sand mobilization  
16 and high waves, although there really wasn't any  
17 quantification of that in terms of the actual inflow  
18 itself.

19 And so additional work is needed to document the  
20 impacts of inflow on the dynamics of the river mouth, and  
21 especially the outlet closure and opening frequency as  
22 flows go up and down. So there really needs to be more  
23 information collected on that issue, because the diversion  
24 is significant enough in dry and critically dry years that  
25 it could interrupt that natural connection to the ocean.

1 Q The applicant's experts performed a series of studies  
2 on this river, including biologist Dr. Hanson. Have you  
3 had a chance to review Dr. Hanson's testimony?

4 A Yes, I have. There were biological assessments  
5 performed by Dr. Hanson in three years. And I looked at  
6 all of their reports.

7 --o0o--

8 MR. DETTMAN: I had two major concerns with the  
9 basic applicant well tests as related to the biology that  
10 was studied at the time. And this had to do with water  
11 quality problems and in 2007 the definite problem with the  
12 lack of habitat due to flow limitation.

13 In terms of water quality, Hanson in 2005  
14 conducted field studies of the fish population in the  
15 lower river, including snorkeling surveys in July and  
16 October. And they found that when the late summer flows  
17 were low, the lagoon supported most of the population of  
18 fish in the lower one mile of stream. And this is not  
19 what one would necessarily expect in the absence of  
20 environmental problems. You would expect there to be more  
21 fish in the lower reach.

22 BY MR. LAZAR:

23 Q So in a truly dry year then, the flows would have been  
24 even lower?

25 A Yes, that's true. 2004 -- and then this gets into how

1 you rate various types of water years and strengths. I  
2 use a system that's been developed by the Monterey  
3 Peninsula Water Management District, such that -- I won't  
4 go into great detail, but basically dry years are those  
5 years the of driest 25 percent of the record. So although  
6 the flows were low in 2004, they did not fall into this  
7 dry category for the entire year. Now, having said that,  
8 there were low flows during the later period in the  
9 summer.

10 Q Dr. Hanson also testified that based on his 2006 and  
11 2007 studies that the pumping had little or no effect on  
12 the steelhead habitat.

13 Did you have any observations regarding Dr.  
14 Hanson's conclusions?

15 A Yes. Dr. Hanson's conclusion must really be qualified  
16 by the experimental design and the environmental  
17 conditions which occurred at the time. There are three  
18 things here that are important:

19 There was a limit on the diversions during the  
20 study period. And this was done I believe, based on the  
21 testimony I've heard, to categorize the zone of influence  
22 around the wells. And because the diversions were  
23 limited, they did not really test whether or not sustained  
24 production from the wells would have a negative impact as  
25 measured by biological features.

1           The other thing that happened is that the pumps  
2 were alternated on an on-and-off schedule to allow  
3 recovery so that the zone of influence would be better  
4 described. And this occurred during a 48-day-long period.

5           And in 2006 the demonstration was conducted when  
6 stream flows were well above normal.

7 Q       And what was the effect of having these environmental  
8 conditions in place during Dr. Hanson's studies?

9 A       Well, in 2006 Hanson found that the effects on habitat  
10 conditions were minimal and really nonexistent, as might  
11 be expected in the situation where the flows are higher  
12 than normal. In other words that's a year, 2006, when  
13 there probably would be surplus flow vis-a-vis the  
14 protection of the public trust resources in the river.

15           And then also water was constrained during this  
16 period of time to only 84 acre-feet per month during the  
17 test period. So you really wouldn't expect there to see a  
18 large impact either on flow 2006 or on the biota under  
19 those circumstances.

20 Q       And did the Hanson 2007 study provide evidence of a  
21 relationship between population and dissolved oxygen?

22 A       Yes. Hanson in 2008 report noted a lack of fish in  
23 the vicinity of the areas where dissolved oxygen was below  
24 six milligrams per liter, which is what he was using as a,  
25 "suitable criterion."

1 Q So Dr. Hanson didn't blame the pumping?

2 A No, Hanson attributed the low DO to a universal low  
3 stream flow at that time of the year and did not attribute  
4 any impact to the effect of pumping the wells.

5 Q But is there a relationship that you were able to  
6 detect in the study between pumping and low dissolved  
7 oxygen?

8 A Yes. There is empirical evidence in the report. And  
9 this is illustrated by the possible effects in figures 52  
10 to 55 where the dissolved oxygen declines to the lowest  
11 level of the study when the new pump is running, during  
12 the first week of September, and then increases after the  
13 pump is shut off. While a direct relationship between the  
14 pumping and low DO is difficult to demonstrate because of  
15 the natural variability in the flows, the flow patterns  
16 that are evident in figures 52 to 56 call for great  
17 caution when setting bypass flow requirements. In other  
18 words you want to err on the side of protecting the  
19 dissolved oxygen in the stream.

20 Q Mr. Dettman, what are critical riffles?

21 A In lower reaches of California streams here in central  
22 California, critical riffles are locations where the  
23 stream gradient and orientation of the stream channel sets  
24 up conditions where the typical depth across the crest of  
25 the riffle, that is the shallow portion of the riffle,

1 basically approaches or is less than the depth of the fish  
2 that is trying to physically migrate upstream or  
3 downstream over the river. These locations are usually  
4 associated with situations where there's an active stream  
5 bank erosion or where the stream has made a rapid change  
6 in direction.

7 Q Did Dr. Hanson identify any critical riffles?

8 A Yes, Dr. Hanson identified several locations during  
9 the reconnaissance survey in the summer of 2006, I  
10 believe. And these locations are specified in his reports  
11 as PT-1 through PT-11.

12 Q Now, you did visit the river yourself; correct?

13 A Yes, I did. I took photographs of locations of these  
14 riffles. And the locations are illustrated in the photos  
15 on CSPA-102, in particular photo 10.

16 --o0o--

17 MR. DETTMAN: Photo 10 and 11 show two different  
18 views of the lowermost riffles in the stream. This is  
19 basically at the head of the lagoon section.

20 BY MR. LAZAR:

21 Q And did you make any conclusions based on these  
22 observations?

23 A Yes, based on my observations and a series of depth  
24 measurements corresponding to the Thompson method across  
25 the crest of the riffle, I believe the lowermost location

1 is vital in setting stream flow requirements for adult  
2 bypass flows in the wintertime. The existing channel at  
3 this location is likely to change and require future  
4 monitoring to ensure safe upstream passage of adult fish.

5 Q But why is this particular riffle a critical riffle?

6 A Based on my review of historical photos along this  
7 coastline, it appears that the hydraulic and the channel  
8 geometries continue to change in response to a major  
9 channel shift that occurred in 1995 as a result of the two  
10 flood events in January 10th and March 10th of that year.  
11 For this reason, the depths across the riffle are too  
12 shallow, well below the criteria commonly used to develop  
13 flow recommendations. For example, based on my  
14 measurements of this riffle in late April, the .7 depth  
15 criteria for adult passage was not met at 146 cubic feet  
16 per second. This highlights the critical nature of the  
17 conditions at this location.

18 Q Are there potential problems with the proposed  
19 diversion impacting critical riffles?

20 A The potential problems are different for adult and  
21 juvenile steelhead. For the adults the proposed  
22 diversions would not normally affect their upstream  
23 migration, but could affect their downstream migration.  
24 During selected periods of below normal years, especially  
25 dry and critically dry years, the proposed diversions

1 could impact depths across critical riffles in a way that  
2 reduces levels of available passage conditions for adults.  
3 A full evaluation of this really requires completion of  
4 the Fish and Game IFIM and flow study.

5 Q I notice on our clock here we were down to below nine  
6 minutes and counting. So we're going to go a little  
7 faster in the next couple sections.

8 A For juvenile steelhead the proposed diversions could  
9 reduce the depth and stream width during downstream  
10 migration of pre-smolts and smolts during October and  
11 November and March through June and during the downstream  
12 immigration of fry and juveniles throughout your entire  
13 year. The primary problem here is that juvenile fish  
14 would be restricted to fairly narrow corridors, in many  
15 cases, you know, probably less than three-feet wide as the  
16 flow diminishes. And that causes a reduction in habitat  
17 for production of the macrobenthic invertebrates, which  
18 would otherwise be consumed by steelhead. Here again, the  
19 full evaluation of this depends upon Fish and Game's  
20 instream flow study.

21 Q Thank you.

22 Have you had an opportunity to review the  
23 diversions proposed in the El Sur Ranch application?

24 --o0o--

25 MR. DETTMAN: Yes, I have. I looked at the three

1 factors here, the 5.84 max diversion, the 5.34, and the  
2 base line diversions.

3 BY MR. LAZAR:

4 Q Thank you.

5 And what were your conclusions there?

6 A Basically my conclusions are that this pattern or this  
7 operation would reduce habitat area in the reach  
8 throughout the lower one mile. The volume of stream flow  
9 would be affected on a diurnal basis such that the effect  
10 of any diversion would magnify the natural variation of  
11 the stream flow on any given day.

12 There would be -- spatial habitat would be  
13 critically affected during the 30-day continuous pumping,  
14 and there'd be relative changes to flow that are  
15 approximately equal to changes in habitat.

16 Q Why is it important that pumping represents the large  
17 percentage of surface flow?

18 A Depending on the durations and timing of pumping at  
19 the maximum rate, the reduced flow could disrupt the  
20 natural hydrologic variability by magnifying the diurnal  
21 flux and discharge.

22 Q And are there examples of this occurring in the Big  
23 Sur studies?

24 A A case in point was the condition in early September  
25 2007 when the test diversions for the Hanson study

1 coincided with the period of critically low flows. At  
2 that time, the stream nearly dried up in the area of El  
3 Sur's pumps. But it did not because the pumping was  
4 curtailed just before the streams were most critical.  
5 Now, this would likely -- had that pumping continued, it  
6 would have likely reduced the abundance of distribution of  
7 bethnics invertebrates in an extremely stressful way and  
8 perhaps resulted in mortality of juvenile fish.

9 Q And what about the 30-day sustained pumping  
10 requirement?

11 A The average sustained pumping over a 30-day period is  
12 expected to equal 3.48, which corresponds to 315 acre-feet  
13 over a 30-day period.

14 Q But I thought the applicant had reduced its proposed  
15 summer monthly withdrawals to only 230 acre-feet per month  
16 or 203 as of June 14th?

17 A El Sur Ranch proposes to limit the monthly diversions  
18 to these levels, yet allow diversions to average 3.34  
19 during a 30-day period.

20 Q You mean 5.34?

21 A 5.34 -- I'm sorry -- during a 30-day period, which  
22 totals the 315 acre-feet over a 30-day duration.

23 These limitations would restrict diversions by  
24 calendar months but would allow increased diversions of 85  
25 acre-feet during a 30-day equivalent period.

1 Q So the 230 acre-foot monthly diversion limit wouldn't  
2 actually limit a 30-day diversion?

3 A Exactly. The actual impacts are within a 30-day  
4 period but distributed over two months. So if the ranch  
5 pumped half of its 30-day period in July and half in  
6 August, the monthly average could be much lower than the  
7 30-day average during that one 30-day period. This  
8 sustained diversion is actually more onerous, most likely,  
9 than the maximum diversion.

10 Q Why is that?

11 A While this quantity is about a half cfs less than the  
12 maximum, the extended duration of diversion at this rate  
13 over a 30-day long period would likely result in greater  
14 impacts to spatial marine habitat, BMI, food production,  
15 water chemistry, and the hydrologic connectivity to the  
16 lagoon and to the ocean.

17 Q I'm going to skip ahead to your proposed  
18 recommendations.

19 You had an opportunity to look at the  
20 recommendations provided by California Department of Fish  
21 and Game. So let me ask you, did you look at those  
22 recommendations?

23 A I did, yes.

24 Q But did you talk to anyone at CDFG?

25 A I talked to several people at CDFG, most notably

1 Robert Titus.

2 Q And did you discuss recommendations for flow?

3 A We discussed the recommendations in general but not in  
4 any specific detail.

5 Q So you didn't compare numbers or anything?

6 A Definitely not.

7 Q Would you say that the two sets of recommendations are  
8 dissimilar?

9 A For the wet season, in the winter months, yes.

10 Q But you would also characterize them as independent  
11 conclusions?

12 A Yes, I would. We specifically -- we discussed whether  
13 to talk about specifics, and decided that in this case it  
14 would be better to have independent opinions.

15 Q So did you have any observations or conclusions  
16 regarding CDFG's recommendations?

17 --o0o--

18 MR. DETTMAN: Yes. For the wet season, there is  
19 a problem in selecting a single median month to develop a  
20 bypass flow requirement. Your refinement is that a daily  
21 update is available on USGS. For the dry summer months,  
22 Fish and Game originally proposed 40 cfs, but I now  
23 understand that it's 29. I concur that this would be  
24 protective and agree with the methods by which Titus  
25 developed their recommendation, by looking at the wetted

1 perimeter analysis.

2 BY MR. LAZAR:

3 Q Did you develop and propose a set of alternative  
4 bypass flow requirements?

5 A Yes, I did. My recommendations are in Figure 8 and  
6 Table 2 of my written testimony, and both shown here on  
7 this graphic.

8 The recommended bypass flows are divided into two  
9 periods: Those in the wet winter so you can protract  
10 median monthly flows provided by the USGS gage; and a  
11 separate set for the summer with our dry season.

12 Q And for wet winter months, you recommended the  
13 historical median flows as a wintertime bypass flow?

14 A Yes, my flow recommendation during the wintertime  
15 would match the natural variability of the stream and it  
16 would use the daily median as a requirement. This would  
17 be consistent with maintaining the high habitat quality  
18 during the wintertime and provide ample opportunities for  
19 the fish to migrate upstream.

20 Q And what is the period recommended for those flows?

21 A This bypass period would extend from December 1st  
22 through July 19th.

23 Q And then what happens on July 19th?

24 A July 19th is the day that the historical median  
25 intercepts 20 cfs, which is the upper range of the -- that

1 I'm using for the summertime. And that occurs basically  
2 on the 19th.

3 And it's also important to note that two-thirds  
4 of the summer there's a minimum of 15 to 20 cfs.

5 Q Okay. So you recommend another set of minimum bypass  
6 flows for summertime. Why is that?

7 A My summertime or dry season recommendations are based  
8 on three factors: Physical habitat, water quality, and  
9 the need to keep the surface connection to the ocean open  
10 as frequently as possible in the system.

11 Q You want to briefly provide some detail on that?

12 A Yes. The physical habitat that's necessary is more  
13 than just maintaining migration opportunities over  
14 critical riffles in the summertime. The fish in the  
15 summer need a full complement of food. They need plenty  
16 of space to move to, not just through, riffles. They  
17 actually occupy riffles in the summertime if the depths  
18 and velocities are suitable.

19 So the flows that shape the base channel during  
20 the winter really set what the channel looks like in the  
21 summertime. And this naturally reduces habitat throughout  
22 much of the reach and is in part responsible for the  
23 steelhead distribution patterns noted by Hanson and Duffy,  
24 where juveniles are concentrated in pockets of deeper  
25 water with boulders, riffles, logs, and overhanging

1 vegetation in banks.

2 MR. LAZAR: I notice that we're out of time. May  
3 I have a couple more minutes to provide a summary?

4 HEARING OFFICER DODUC: Go ahead.

5 MR. LAZAR: Thank you.

6 BY MR. LAZAR:

7 Q Your recommendations are for 15 to 20 cfs minimum  
8 flow?

9 A Yes. My belief is that the threshold may be in the  
10 range -- I'm sorry. To the extent that diversions reduce  
11 stream flow during the dry season, there is a threshold,  
12 below which habitat decreases rapidly, and above which the  
13 habitat quality changes more slowly. This has been  
14 detailed in concept by Rob Titus. While this threshold is  
15 yet to be determined for the Big Sur River, I believe the  
16 range of 20 to 40 cfs is reasonable for the river.

17 Q Now, what about -- you also describe water quality as  
18 being a factor.

19 A The bypass flows are really necessary to ensure that  
20 water quality and specifically dissolved oxygen is kept  
21 above a standard level. With flows below 15 cfs, there is  
22 a low DO zone in the lower river below the VTN reference  
23 site and adjacent to the zone of influence of the wells.  
24 The fish abundance in this reach is very low, and this  
25 corresponds with low dissolved oxygen. It's my opinion



1 line pumping. And then, further, when the flows are okay  
2 but the DO is too low, drop to base line pumping if the  
3 saturation is below 90 percent, and then cease pumping if  
4 the saturation of dissolved oxygen is less than 75  
5 percent.

6 In terms of monitoring, the diversion I think  
7 should be monitored basically at the new USGS gage that's  
8 been outlined by Chris Shutes using realtime information.  
9 And that information is now available on the website.

10 And then, lastly, for water quality monitoring,  
11 there needs to be a summertime station located in the zone  
12 of influence in the area where the lowest DOs have been  
13 observed. And I believe this is near the piezometer 3 or  
14 4 station that's been identified by Hanson in his report.

15 BY MR. LAZAR:

16 Q Thank you, Mr. Dettman.

17 Just to clarify, the flows that you've  
18 recommended are at the point of diversion or measured at  
19 the stream flow gauge?

20 A These are measured at the stream flow gauging station,  
21 which basically corresponds to the point of diversion.  
22 There's been a lot of detail expressed about where this  
23 actual diversion is. But I think there needs to be a  
24 standard developed for a location, and the USGS gauging  
25 site seems to be the best location.

1 Q Thank you, Mr. Dettman.

2 HEARING OFFICER DODUC: Thank you, Mr. Lazar.

3 We will begin cross-examination with the  
4 Department of Fish and Game. Ms. Ferrari.

5 And the witnesses will be cross-examined as a  
6 panel. We will give 60 minutes in total, Ms. Goldsmith,  
7 not each.

8 MS. FERRARI: Chandra Ferrari for the Department  
9 of Fish and Game. I have a couple of questions for Mr.  
10 Dettman.

11 CROSS-EXAMINATION

12 BY MS. FERRARI:

13 Q I know that we had just talked about this. But your  
14 summer flow recommendation you said was to be measured at  
15 this gage. Are you talking about a new recently installed  
16 gage?

17 A Yes. I'm speaking of the new USGS gage, and I believe  
18 the number is 11143010. It's located in the Andrew Molera  
19 State Park.

20 Q So assuming if another gage was used further upstream,  
21 would you think that some additional number would need to  
22 be added to your bypass flow recommendation to account for  
23 losses that might occur?

24 A I would not recommend that the upper gage be used.  
25 But if it was to be used, then there would have to be an

1 increment added as you describe.

2 Q Okay. And so your current flow recommendation  
3 wouldn't also account for any losses to the river that  
4 might occur as a result of the pumping from El Sur Ranch?

5 A There is a possibility that the location of the new  
6 gage is within the zone of diversion, I'll call it. There  
7 was much testimony and disagreement, and continue to be on  
8 that. I believe that Mr. Custis identified that there  
9 would be a better location for actually monitoring flows  
10 in the river above the diversion point at the upper foot  
11 bridge, so to speak, in the Andrew Molera State Park  
12 parking lot. That's located about a thousand feet  
13 upstream I believe of the large bend in the river.

14 Q Right.

15 A Would that be fair?

16 And it's at a location where the natural  
17 constriction of bedrock confines the alluvial portion of  
18 the channel in that reach to a very narrow cross-section.

19 Q Thanks.

20 You also -- you have in your testimony that  
21 substantial evidence exists that a significant decline in  
22 steelhead abundance within the Big Sur River has occurred.

23 Do you have -- or is there a time frame  
24 associated with when this decline has happened?

25 A There's so infrequent data collected on the Big Sur

1 that I couldn't really say. Looking at the information  
2 that was collected by Dr. Hanson and comparing that to the  
3 information that was collected by Dr. Titus in 1994, I  
4 believe, it appears that at least between 1994 and the  
5 current condition that there's been a reduction.

6 Q Okay. So we're talking about even just the last 15  
7 years?

8 A Yes.

9 Q Is that consistent with trends for steelhead  
10 populations in other coastal watersheds that you have  
11 worked on?

12 A No, not in that one-mile reach.

13 Q Okay.

14 A We don't really know what the population -- and it  
15 would have been good to monitor the populations upstream  
16 during the period when the diversion tests were being  
17 done. But based on information that I'm aware of in other  
18 coastal streams, and I've worked on this extensively on  
19 the Carmel River and the Santa Cruz County, the  
20 populations in the lower reach of the Andrew Molera State  
21 Park are about an order of magnitude lower than other  
22 streams.

23 Q Okay. Thank you.

24 You also mentioned in your testimony that the Big  
25 Sur River is unique because it is able to maintain this

1 connectivity with the ocean.

2 A That's correct.

3 Q And what are the problems associated with a lagoon  
4 closing?

5 A Well, the lagoon closing prevents fish that would  
6 otherwise migrate from the ocean into the lagoon from  
7 doing so. And in many coastal streams in the summertime  
8 it's not even an option. The mouths are completely closed  
9 off. The Carmel River is a very good case in point.  
10 There are other natural streams farther north - Waddell  
11 Creek comes to mind - where there's a berm developed, and  
12 the habitat within the lagoon is isolated from the ocean.  
13 So that's the primary impact in terms of what might occur  
14 as a result of the proposed diversions.

15 The actual habitat value in the lagoon when the  
16 lagoon closes, from what I've been able to see, is good.

17 Q Does the habitat value change at all if there is an  
18 extended lagoon closure?

19 A It could, if that was combined with a reduction in  
20 inflow. This occurs every year on the Carmel River where  
21 the inflow is reduced to essentially zero during the  
22 summertime. And in those sorts of circumstances, you tend  
23 to get really wild fluctuations in dissolved oxygen,  
24 extremely high levels of carbon dioxide. The lagoon tends  
25 to stratify and it forces fish into areas that are warm

1 but don't have much DO, and that's a definite problem. We  
2 often see predation at very high levels in these systems  
3 when the lagoon water quality goes, I'll call it, sour.

4 Q So the low flow into the lagoon when it's closed is an  
5 exacerbating factor to the conditions?

6 A Yes, yes.

7 Q You also note in your testimony that reduced flow  
8 could result in a reduction of the macrobenthic  
9 invertebrate production?

10 A Yes.

11 Q Can you explain that more fully how that might happen?

12 A Yes. The macrobenthic invertebrates - and basically  
13 these are aquatic insects that are really in the juvenile  
14 stage in the stream and they're quite abundant in coastal  
15 streams and serve as a primary food source for steelhead -  
16 if there's wide fluctuation in dissolved oxygen or if the  
17 stream flow is decreased within a certain range, that  
18 draws back the -- in the riffle habitats draws back water  
19 from the edges of the stream and in extreme cases dries  
20 portions of the riffle up, and that results in direct  
21 mortality to these insects and thereby lowers the food  
22 production that's available for juvenile steelhead and  
23 other fishes and birds.

24 Q So this could also affect the growth rates of the  
25 juveniles at that time if there's less food available?

1 A Definitely can affect the growth rates, particularly  
2 during the summertime when temperatures tend to be high  
3 anyway, the fish is using much of its energy just to exist  
4 and look for food. You don't really get mortality  
5 necessarily, but the growth rates of the fish decline as a  
6 result of that.

7 Q Could temperature -- or higher temperature at the time  
8 also impact growth rates?

9 A Yes. Yes, the higher temperatures up to a point  
10 actually stimulate growth, assuming there's food  
11 available.

12 Q Right.

13 A If food is limited, then the increased temperatures  
14 reduce the growth rate and ultimate size of the fish at  
15 the end of the growing period.

16 Q Do you have an opinion on setting bypass flows for  
17 juvenile steelhead based on a .3 foot depth criterion?

18 A I think that the .3 foot criterion is adequate for  
19 looking specifically at whether or not fish can physically  
20 move from one habitat unit to another over a riffle. But  
21 it is not in my opinion, and I think in most fishery  
22 biologists' opinion, a single number that you could use to  
23 set flow requirements in the summertime for juveniles.  
24 It's much more complicated than that.

25 Q And yet you have in your testimony, I thought - and

1 maybe you could expand on this a little bit - that with a  
2 .3 foot depth criterion the juveniles are exposed to a lot  
3 of other stress factors such as predation and other  
4 limited characteristics; is that true?

5 A That can be true. The Big Sur River has a really full  
6 complement. And, you know, we talked about diversity.  
7 There's a very full complement of predatory birds. During  
8 my stream walk I observed -- I'm trying to remember  
9 here -- I think a couple of dozen western breeds right at  
10 the river mouth, a flock of up to 100 to 150 seagulls in  
11 the outflow zone, upwards of -- well, there were two  
12 groups of mergansers. And those were actually fishing at  
13 the time that I was observing them. And they move --  
14 they're interesting birds because they can essentially fly  
15 under water. They're very quick and they also run over  
16 riffles. So they're very good at picking out fish from  
17 shallow sections of the stream.

18 Q I just have one more question. And then I believe my  
19 colleague will also have a couple for you.

20 You note that you have been in charge of fish  
21 rescues?

22 A That's correct.

23 Q I imagine that you only need to come out for fish  
24 rescue when conditions on the watershed are pretty poor?

25 A That is basically the way it works. And you're

1 speaking to the conditions on the Carmel River. In  
2 working there 17 years, I was in charge of the fish  
3 rescues for all 17 of those years, starting out with a  
4 very simple program, but then and now continuing with a  
5 very complicated one.

6           We basically tried various techniques and settled  
7 on beginning rescues when the stream flow at the Highway 1  
8 gage there declined to ten cubic feet per second. And  
9 that gave us enough time so that we could then move  
10 upstream and collect as many fish as we possibly could  
11 before the stream was reduced to critical or lethal  
12 conditions. And that usually occurs somewhere around a  
13 range of one to two cfs. It depends upon specific  
14 locations, how much aquatic vegetation is developed in  
15 specific pockets. It's quite complicated. But the fact  
16 is you have to get in there before the pools essentially  
17 are isolated. Once the pools are isolated, they  
18 experience dissolved oxygen CO concentrations very similar  
19 to what I observed in the lower Big Sur in the Hanson  
20 work.

21 Q    So essentially -- you know, in your experience as a  
22 fish rescuer, you note certain alarming factors that you  
23 look for that might precede a fish rescue and you've noted  
24 some of these similar factors on the El Sur?

25 A    On the Big Sur?

1 Q Yes, Big Sur River.

2 A Yes. The dissolved oxygen in particular, because  
3 there was quite a bit of information collected on that, I  
4 see very close parallels between that and the lower Carmel  
5 River when it's in what I call critical habitat  
6 conditions.

7 Q Thank you.

8 MR. TAKEI: My name is Kevin Takei. I'm a staff  
9 counsel with Fish and Game. And actually I have one  
10 question for Mr. Shutes and some questions for Mr.  
11 Dettman. I'll ask my question of you, Mr. Shutes, so Mr.  
12 Dettman can catch his breath for a moment.

13 CROSS-EXAMINATION

14 BY MR TAKEI:

15 Q Mr. Shutes, I just want to clarify a point in your  
16 testimony. You testified on page 3 of your testimony,  
17 which would be CSPA-1, that "Determining the availability  
18 of water in the Big Sur River is difficult due to a series  
19 of unusual technical circumstances peculiar to the  
20 proposed diversion." You go on to list five factors, one  
21 of which specifically you state that "The effects on river  
22 flow from well pumps has a time lag."

23 Now, Mr. Custis' testimony discussed things about  
24 how you could turn off the pumps and, however, the effects  
25 of the pumping on the river could continue to draw down

1 water in the river despite having turned off the pumps.  
2 And I'm trying to understand, is your statement about  
3 effects on river flow from well pumps as a time lag  
4 similar to Mr. Custis'? Or if you can explain what you  
5 meant by the time lag.

6 A First of all, I'm not a qualified expert  
7 hydrogeologist. But it was my observations from the  
8 written material that was submitted in this proceeding  
9 that there are two issues:

10 One is a short-term time lag that takes place  
11 over a period of a few days. That's highlighted in the  
12 SGI reports. So that if you were concerned with something  
13 like the closing or opening of a lagoon, you might not  
14 understand completely the effects of diversions on the  
15 opening and closing of the lagoon because of that time  
16 lag. And it sounded like a couple of days was the primary  
17 period during which that short-term lag took effect.

18 And then there's the cumulative effect that Mr.  
19 Custis described. And that's described not only in his  
20 testimony but in some of his comments on the EIR. And  
21 basically I was simply highlighting, as I took my role to  
22 be in this, an important point that the Board needs to pay  
23 attention to in the testimony.

24 MR. TAKEI: Okay. Thank you.

25 Mr. Dettman, I have a couple of questions.

CROSS-EXAMINATION

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BY MR TAKEI:

Q I know you looked at the Fish and Game's wetted perimeter report, and I just want to get some of your thoughts on that.

Isn't it true that a wetted perimeter report is typically created to address a particular spot or a single transect on a river?

A Well, ideally you would have more than one transect on a reach of a river to use to make a recommendation. And typically the wetted perimeter analysis that I've done and I'm aware of you want to try to select riffles if you can because that's the most sensitive area in the stream to do this wetted perimeter analysis and also a very good index of the production of food for steelhead or other fish.

Q I guess I'm interested in your expert opinion on the methodology we use. Because we heard during testimony throughout the prior two days that there may have been some concern about Fish and Game's use of averages to come up with its recommended stream flow. And if you recall, on the wetted perimeter report at Fish and Game, we looked at a number of habitat units and transects and we identified a series of ranges among habitat units as well as an entire range over the entire river itself. And rather than select the most restrictive flow, which would

1 be the highest flow to create the wetted perimeter, Fish  
2 and Game took an average of these flows. And at some time  
3 some people have referred to that as an average of  
4 averages to come up with its recommended flow. And I was  
5 interested in your thoughts about Fish and Game's  
6 methodology to try to address these ranges and our use of  
7 averages.

8 A I think that Dr. Titus was using the available  
9 information that he had and he did it in a correct way.  
10 Ideally - and I think this is, you know, indicated by the  
11 fact that these are interim flow recommendations that Fish  
12 and Game is making and it's all predicated on there being  
13 a completion study of the IFIM and PHABSIM report, which  
14 really will set aside my recommendation, set aside Titus'  
15 and set aside the applicant's really - it will be a  
16 standard by which everyone can exam the impact.

17 But having said that, I think Dr. Titus did a  
18 good job. I reviewed his work. If he had more  
19 information available, I think it might have been somewhat  
20 proved. But for the purpose that it's being used for, to  
21 develop interim recommendations, I think it was a good  
22 job.

23 Q I have a question about the growth of steelhead during  
24 the summer. And I think there's literature, as well as I  
25 think it was discussed in testimony perhaps, that the slow

1 growth of steelhead is typical during the summer in  
2 coastal steelhead populations. And I believe there was  
3 some implications -- or it was implied during some  
4 questioning that the steelhead may have adapted to the  
5 summer low flow periods.

6           In your opinion, if flows in the Big Sur River  
7 were actually higher during the summer -- I mean, I'm  
8 inviting you to fairyland right now, to make believe. But  
9 if the flows were higher during the summer and that food  
10 delivery was higher than what it typically is during the  
11 summer, would you expect the steelhead to continue to  
12 grow?

13 A     I would expect them to grow more rapidly than they  
14 currently do. Although I did note in my testimony that  
15 this system at least in 1994 produced smolt-sized fish in  
16 one year, which is an indication that the fish grew well  
17 in that year.

18           The growth that has been characterized by Dr.  
19 Hanson appears to be in the good range, I would  
20 characterize it. But keep in mind that we're only  
21 describing a few fish. Production in fish populations is  
22 a metric that involves large numbers of large fish. So  
23 the fact that you have good growth in a particular year or  
24 particular location may not mean that much to the overall  
25 population if there's only a few fish that are exhibiting

1 that good growth.

2 Q So I guess maybe the point is, do you think it's a  
3 fair assessment to say that the slow growth during the  
4 summer isn't necessarily an adaptation of a fish, i.e., a  
5 result of natural selection; it's that --

6 A Well, yeah. And there's a confusion oftentimes there  
7 with adaptation and adapt. An adaptation is a genetically  
8 determined trait in many cases. A fish adapting to a  
9 situation is just a change in behavior to cope with the  
10 current situation. It's not an adaptation that's  
11 genetically passed along.

12 Q Would you agree that the survival of steelhead smolt  
13 is significantly impacted by its size? In other words,  
14 the larger the young steelhead that leaves the river and  
15 enters the ocean, the larger the fish, the greater its  
16 chance of survival and ability to return to the Big Sur  
17 River?

18 A Most definitely. This is a well described function  
19 for steelhead and salmon. The rates are somewhat  
20 different. But for steelhead, it's typical that a  
21 young-in-the-year fish will survive only at about a .03  
22 percent or up to 1 percent; whereas a large fish that's  
23 160 to 200 millimeters long oftentimes, you'll get 5 to 10  
24 percent of those fish back. So size is an extremely  
25 important component of returns of fish to fresh water from

1 the ocean.

2 Q Okay. And I have some questions about food  
3 availability during low flow.

4 I think I heard, and correct me if I'm wrong, but  
5 that you testified that the large portion of food  
6 production occurs in riffles.

7 A That's correct.

8 Q And is it also correct or accurate to say that most  
9 steelhead would essentially place themselves or locate  
10 themselves at the head of runs downstream of these  
11 food-producing riffles?

12 A Yes. And not just runs but pools also. The fish are  
13 actually very territorial. And the younger fish, the  
14 youngest ones, the young of the year, the ones that aren't  
15 a year old yet, the smaller ones, often occupy the riffle  
16 habitats, because if they drift down into the pools,  
17 they're eaten. And steelhead are cannibalistic. It's not  
18 a well known fact, but it is a fact. And so part of the  
19 behavioral patterns that we see in nature are derived from  
20 the fact that the youngest fish occupy riffles and the  
21 larger fish occupy these pools and runs in the deeper  
22 portions, as you're describing, and then collect aquatic  
23 insects that are drifting downstream.

24 Q So to summarize or characterize what you just said, is  
25 it accurate to say then that the largest and perhaps

1 strongest of the fish population would locate itself  
2 downstream of these riffles to catch the most food and the  
3 weaker, younger fish perhaps have to be located a little  
4 bit further upstream just because, like you said, they're  
5 going to be eaten -- pretty much anything that flows down  
6 is going to be eaten?

7 A I wouldn't say pretty much anything.

8 Q Of food.

9 A The point is taken. And the segregation between the  
10 various size groups that you see in the stream is partly  
11 due to the fact that there's a risk for small fish being  
12 eaten by a large fish. It's also due also to just  
13 physical space. A large fish can't really exist in a  
14 situation where there's only .3 or .5 feet of depth, where  
15 a small young of the year that's only a few inches long  
16 can do that and collect food while it's in the riffle.

17 Q So then would you agree that under low flow conditions  
18 there's going to be little or no drift of food organisms  
19 from one riffle run or riffle pool to the next one  
20 downstream?

21 A Yes. Basically though I think what you're getting at  
22 here is that basically the stream is comprised of an  
23 energy sink and an energy production zone. And typically  
24 the energy sink, that is areas that end up having more  
25 food consumed than produced, is typically a pool. The

1 riffle is just the opposite. It actually produces more  
2 fish than -- more food than is consumed in the riffle  
3 itself, and that's why there's drift down into the next  
4 pool. But most of that drift doesn't make it down to the  
5 next riffle and the next pool.

6 MR. TAKEI: All right. Thank you, gentlemen.  
7 I don't have any more questions.

8 HEARING OFFICER DODUC: Thank you. And that  
9 concludes the Department of Fish and Game's cross.

10 Mr. Johnson, do you have cross?

11 MR. JOHNSON: I do not.

12 HEARING OFFICER DODUC: Mr. LeNeve, do you have  
13 cross?

14 MR. LE NEVE: Yes, I do.

15 HEARING OFFICER DODUC: Actually, why don't we  
16 take a ten-minute break. And when we continue, Mr. LeNeve  
17 will start his cross-examination.

18 (Where upon a recess was taken.)

19 HEARING OFFICER DODUC: If everybody will take  
20 their seats, we'll resume with cross-examination by Mr.  
21 LeNeve.

22 MR. LE NEVE: Thank you. My name is Brian  
23 LeNeve. I'm here today representing the Carmel River  
24 Steelhead Association.

25 CROSS-EXAMINATION

1 BY MR. LE NEVE:

2 Q Mr. Dettman, I'm going to ask you questions more so  
3 than any other experts, not because I want to pick on you  
4 but because I was pretty nervous in the first two days and  
5 didn't know what I could or couldn't do. So it's not  
6 personal against you.

7 A That's all right.

8 Q You're giving your opinion and I'm only asking for  
9 your opinion.

10 Is the goal of the listing of the species to  
11 recover that species?

12 A Most certainly. But, first of all, to recognize that  
13 there's a problem. Usually the recovery process occurs  
14 after the listing.

15 Q Yes. But once a species is listed, the goal is to  
16 recover the species?

17 A This is true.

18 Q Will prolonged lowering of a river to minimum flow  
19 requirements recover steelhead?

20 A Only if those minimum flow requirements are adequate  
21 to protect the live history stages that are promulgated  
22 for.

23 Q Could prolonged lowering of a river further diminish  
24 steelhead populations?

25 A Most definitely.

1 Q Your flow requirements are a little bit more elaborate  
2 compared to El Sur Ranch and DFG. Will your flow  
3 requirements recover steelhead?

4 A I believe they would, yes.

5 Q Would DFG's flow requirements recover steelhead?

6 A I believe they would also, yes.

7 Q Would El Sur Ranch flow requirements recover  
8 steelhead?

9 A I don't know. But I think -- my basic reaction is to  
10 say no, primarily because they're not really flow  
11 requirements. They allow various manipulations --  
12 artificial manipulations to try to maintain the population  
13 in that lower reach.

14 Q Could El Sur Ranch flow requirements or would they  
15 want to pump further jeopardize steelhead?

16 A Yes, the increment above what's occurred historically,  
17 and this is in my testimony, would further damage the  
18 steelhead population in that reach.

19 Q Dr. Hanson made two snorkeling surveys on the Big Sur  
20 in two different years. This accounts for 358 and 379  
21 fish on -- or an average of 369 fish on 1.04 miles of  
22 river. That's 5,491 feet of river. Dr. Hanson stated he  
23 felt that this was a low estimate.

24 Do you feel 369 fish on 1.04 miles or .06 fish  
25 per foot is low?

1 A Definitely. I think I testified to that in  
2 cross-examination of Fish and Game. And it's also in  
3 my --

4 Q Is it critically low?

5 A Yes. It's actually indicative of what one might  
6 expect -- if it was true throughout the entire reach of  
7 river, it would be indicative of what you might call an  
8 endangered level rather than a threatened level.

9 Q Considering steelhead is listed as threatened, and a  
10 lot of us believe it should be listed as endangered, is  
11 there a requirement to provide adult fish passage for all  
12 fish or just the majority of the fish?

13 A In whose proposal?

14 Q In considering -- is there a requirement under the  
15 Endangered Species Act to provide flow requirements for  
16 all fish or just the majority of the fish?

17 A I think that would depend on certain situations. But  
18 I would say that the goal would be to provide adequate  
19 passage conditions for enough fish so that there is a  
20 surplus when they reproduce.

21 HEARING OFFICER DODUC: Ms. Goldsmith.

22 MS. GOLDSMITH: I have an objection to that  
23 question and ask that the answer be stricken. It calls  
24 for a legal conclusion, of which Mr. Dettman is not  
25 qualified.

1 MR. LE NEVE: I did ask Mr. Dettman for his  
2 opinion, not for a legal conclusion.

3 MR. LAZAR: But I don't think it's been explained  
4 why Mr. Dettman might not be qualified.

5 HEARING OFFICER DODUC: That's fine.

6 Ms. Goldsmith, we'll take your objection under  
7 notice. But the witness is allowed to answer as his  
8 opinion but not a legal conclusion. We'll weigh your  
9 objection in considering that as evidence.

10 MS. GOLDSMITH: And then my objection goes to his  
11 opinion as well, because his opinion is a legal  
12 conclusion. Only experts are allowed to offer opinions.

13 Thank you.

14 HEARING OFFICER DODUC: Thank you.

15 MR LE NEVE:

16 Q Is the kelt an adult steelhead?

17 A Yes, that's a fish that has previously spawned in the  
18 near distant future -- I mean the near past. I'm sorry.

19 Q Do kelts need adequate flows to migrate downstream?

20 A Yes, they do. They're actually fairly vulnerable  
21 because of their physiological state. They're relatively  
22 week. But they do need adequate conditions to move  
23 downstream, yes.

24 Q If I was to give you evidence that there's kelts in  
25 the river all year-round, would that change your flow

1 requirements?

2 A No, I don't believe so. I think the flows are  
3 adequate for sustaining the kelts during the period of  
4 time that they're moving downstream. There would be a  
5 period in the summertime where in some years they would be  
6 holed up, so to speak. But the conditions in those pools  
7 would be adequate for them to survive until they could  
8 migrate downstream.

9 Q And, again, we're talking about recovering a species  
10 now. So wouldn't it be better for these kelts to make it  
11 out to the ocean so they can renourish themselves and come  
12 back and spawn again?

13 A Perhaps. Although there are predators in the surf  
14 zones that could take these fish if they move out when  
15 they were weakened. So I think it's a fairly complicated  
16 biological situation.

17 I would say in general it's better for kelts to  
18 move out to the ocean as soon as possible after they  
19 spawn. They don't necessarily do that though. In Waddell  
20 Creek, for example, studies that were done in the '30s and  
21 '40s by the Department of Fish and Game, they found that  
22 approximately 25 percent of the kelts moved after May 31st  
23 downstream. So some of that movement is due to the fact  
24 that they were recent spawners or spawned late. And other  
25 parts of it are that it takes fish a little longer to move

1 downstream. On the Big Sur River, I would anticipate that  
2 because it's such a short stream, that they would  
3 naturally move downstream relatively rapidly, similar to  
4 what they do in Waddell Creek.

5 Q Silver salmon are also -- they're an endangered  
6 species. Are the flow -- they are. Are the flow  
7 requirements the same for silver salmon as they are for  
8 steelhead, do you know?

9 A In general, if you're talking about upstream migration  
10 in adults and swimming ability and anything that's related  
11 to that, silver salmon are not quite as athletic as  
12 steelhead, so they actually might require a little bit  
13 deeper water, maybe a little slower water actually to move  
14 upstream. And this is one of the things that's not really  
15 relevant in this case for steelhead, because the water  
16 velocities in this reach of the stream are not high enough  
17 to impede their movement. But it's possible for silver  
18 salmon that you also have to consider what the velocity  
19 over these shallower areas were before you set a flow  
20 requirement for them.

21 Q If I was to give you evidence that there's silver  
22 salmon in Big Sur River, would that change your dates of  
23 your flow requirements?

24 A Definitely, yeah. Yeah, because silver salmon spawn  
25 earlier than steelhead do, typically migrate upstream

1 earlier than steelhead do. They're more susceptible to  
2 high water temperatures and low dissolved oxygen. So  
3 their requirements might be higher than steelhead.

4 Q You barely start driving up your adults for the  
5 year -- for your flows for adult passage in December. I  
6 believe go from 20 to 52 in December.

7 A Yes.

8 Q Are there adult steelhead in the river before then?

9 A I don't think there's been a well documented study.  
10 But I've heard testimony this morning and in the hearing  
11 in June referencing fish in the summertime, adult fish in  
12 the river. It wouldn't surprise me that they're in there  
13 because the connection with the ocean is maintained  
14 throughout most of the year. So fish can access a fresh  
15 water zone from the ocean pretty much at will.

16 Q You kind of answered this question. But you don't  
17 know of any studies that have been done regarding whether  
18 there's silver salmon in the Big Sur or not?

19 A No, I don't.

20 Q Do you --

21 A The only real thing I do know -- well, can I talk to  
22 you on that?

23 Q Yes.

24 A I wouldn't call them fishery studies. But I am aware  
25 that -- and I've reviewed the anthropological information

1 on the midden mounds that are along the coastline between  
2 Monterey and San Luis Obispo. And those show presence of  
3 silver salmon in them and steelhead. So I would presume  
4 that prior to European man arriving they were -- I don't  
5 want to say common, but they were certainly in the area.

6 Q Would you -- I'm going to make a statement here and  
7 you tell me whether you feel this is true or not.

8 Would steelhead be the best -- steelhead  
9 fishermen be the best indicators of whether there are  
10 silver salmon in the river right now or not? The people  
11 I --

12 A Would steelhead fishermen be the best indicator of  
13 whether there's silver salmon in the river?

14 Q Yes?

15 A Yes, if there was a, you know, study done where people  
16 turned in report cards and reported what they caught,  
17 certainly that would be good information.

18 Q If I gave you an indication of evidence that there  
19 were adult steelhead in the river as early as September,  
20 would that change the dates of your flow requirements?

21 A If I knew that the fish were intent on moving upstream  
22 at that time, perhaps.

23 Q You already testified a little bit - just going back  
24 to that - .3 feet for juvenile passage. And multiple  
25 people stated the most food is in the riffles. Would .3

1 feet give adequate rearing and nurturing habitat for  
2 steelhead?

3 A Only for the very smallest fish of the current brood  
4 year. Those fish when they come up out of the ground are  
5 22, 23 millimeters long. They grow fairly rapidly, but  
6 they do use the margins of the stream in the riffles and  
7 along the runs for habitat. But for the bulk of the  
8 summer, .3 feet is marginal, I would say. It would -- a  
9 lot would depend not just on the depth but the other  
10 conditions that are important for producing young fish.  
11 Most importantly, is it three feet of depth over sand or  
12 is it three feet of depth over cobble? Is the cobble  
13 that's in the bottom of the stream imbedded in sand? In  
14 other words, is there a high degree of sand surrounding  
15 the cobbles? And if that's true, then .3 depth won't  
16 provide much habitat at all.

17 MR. LE NEVE: Thank you.

18 HEARING OFFICER DODUC: Thank you, Mr. LeNeve.

19 Ms. Goldsmith, are you ready for your cross?

20 MS. GOLDSMITH: I am, Your Honor.

21 HEARING OFFICER DODUC: In the meantime, let me  
22 ask, is Ms. Lockwood here?

23 MR. LE NEVE: She is not going to make it.

24 HEARING OFFICER DODUC: She is not going to make  
25 it according to Mr. LeNeve back there.

1 MR. LE NEVE: She called me last night and said  
2 she wasn't going to make it.

3 HEARING OFFICER DODUC: Thank you very much.  
4 Before you begin, Ms. Goldsmith. We just  
5 received this. Is this from you?

6 MS. GOLDSMITH: Yes, it is.

7 HEARING OFFICER DODUC: Okay.

8 CROSS-EXAMINATION

9 BY MS. GOLDSMITH:

10 Q Mr. Dettman, I reviewed your resume and listened to  
11 your testimony, and it's clear that you have a great deal  
12 of experience in other California coastal streams, most  
13 particularly in the Carmel River; is that correct?

14 A As I would say, most of the work that I've done in the  
15 last 30 years has been on the Carmel River.

16 Q Isn't it true, however, that you've only had a single  
17 day of field investigation on the Big Sur River?

18 A Well, for this proceeding, that's true. I did  
19 volunteer to do some work for Dr. John Williams as part of  
20 a water rights proceeding some eight to ten years ago. I  
21 don't know the exact date. I don't remember. But part of  
22 that work was involved doing snorkel survey from river-end  
23 down stream into the upper end of the lagoon. I'm trying  
24 to recall the date or the year. I believe it was 1995 or  
25 '96.

1 Q But you didn't include that data in your testimony?

2 A No.

3 Q And your one-day field reconnaissance occurred on  
4 April 29th of 2011, this year?

5 A That's correct.

6 Q And the flows at the gage at that point you report  
7 were 125 cfs?

8 A I believe that was the upper gage. My estimate of the  
9 lower gage I believe was 140.

10 Q Yes, you did a complicated calculation for which you  
11 provided your work sheet?

12 A That's true.

13 MS. GOLDSMITH: Larry, there is a -- thank you  
14 very much.

15 Q And isn't it true -- I'm putting up there a USGS gage,  
16 and I believe this would be El Sur Ranch Exhibit No. 44.  
17 And this is a USGS gage that shows flows from sometime  
18 before February 12th through sometime after May 21st, and  
19 it includes April 29th. Isn't it true that only a month  
20 before your visit the flows at the Pfeiffer State Park  
21 gage, the 11143000, were almost 5,000 cfs?

22 A Yes, that's true. That was a good size storm.

23 Q One of the largest size storms in the history, isn't  
24 that true, history of flows?

25 A I haven't looked at the peak flow data. But I would

1 characterize it as a -- one of the larger ones perhaps.

2 Q Now, the Duffy report, which is ESR-34, contains a  
3 graph showing peak flows for each year, and it ends before  
4 2011 but it does provide some background to peak flows, is  
5 that right?

6 A Yes, I do recall there is that graph, yes.

7 Q Thank you.

8 And doesn't a one-day field investigation under  
9 the flows that you observed provide very, very limited  
10 information that's useful in talking about what flows  
11 would be at low flow stages?

12 A You mean could I make projections or --

13 Q -- accurate projections --

14 A -- extrapolation of accurate flows and depths?

15 Q Accurate projections, yes.

16 A I don't think I was -- I was not hired to do that. I  
17 certainly wouldn't do that.

18 Q Thank you.

19 And another part of your testimony talked about  
20 your -- about other coastal streams that you've looked at,  
21 including the Carmel, Salinas, Pajaro, Garrapatta. And  
22 you cite a list on page 9 of these streams and say  
23 "critical habitats," and steelhead populations have been  
24 directly affected by groundwater pumping, surface  
25 diversions and the complex linkage between surface flows

1 and groundwater flowing in known and definite channel"; is  
2 that right?

3 A That's correct.

4 MS. GOLDSMITH: Would you put up the next slide  
5 please?

6 --o0o--

7 BY MS. GOLDSMITH:

8 Q Now, NMFS did a threats assessment evaluation that you  
9 may be familiar with.

10 A Yes, I saw that.

11 Q And we have extrapolated from that larger report the  
12 streams that you have mentioned. And this slide, which I  
13 would like to have identified as ESR-45, is a compilation  
14 of those threats that NMFS found. And isn't it true that  
15 for the Carmel River groundwater extraction was a major  
16 threat?

17 A Most definitely, yes.

18 Q And dams and water diversions, direct water diversions  
19 are a major threat?

20 A Where?

21 Q On the Carmel.

22 A No. Dams are not a major threat on the Carmel.

23 Q But NMFS --

24 A Groundwater extraction is.

25 Q NMFS found that dams --

1 A NMFS opinion is that and my opinion would be  
2 different.

3 Q All right. And urban development would be a major  
4 threat on the Carmel?

5 A I would say the manner in which the urban development  
6 has been done at times and in certain locations is. But  
7 there's also some locations on the Carmel where there's  
8 been an urban development done and it's actually  
9 compatible with fish.

10 Q So you disagree with NMFS that urban development is --

11 A At sometimes, yeah, I would say I often disagree with  
12 NMFS.

13 Q Isn't it true that the main stem of the Carmel below  
14 San Clemente Dam dries up and is reduced to isolated pools  
15 in the -- by late spring or early summer and is  
16 characterized that way through the rest of the year?

17 A No.

18 Q How would you describe it?

19 A The habitat below San Clemente Dam is actually in  
20 relatively good shape until you get to within about six to  
21 eight miles of the ocean. And at that point, the  
22 groundwater extraction is greater than the flow releases  
23 that are made from the upstream dams, and stream dries up  
24 in that reach.

25 Q So you have six to eight miles of dry --

1 A -- of dewatered stream in the lower Carmel River,  
2 that's correct. And that's due to the fact that  
3 groundwater extraction exceeds the inflow.

4 Q And the Carmel River inflow is the main source of  
5 water for the entire Monterey Peninsula; isn't that right?

6 A It's one of the sources, yes.

7 Q It's the main source, isn't it?

8 A Well, that's actually changing. As this Board knows,  
9 there are restrictions here on that. But --

10 Q -- historically it's been --

11 A -- historically, certainly that's true.

12 Q Thank you.

13 And similarly with respect to the Pajaro and the  
14 Salinas rivers, isn't it true that their main stems are  
15 severely impaired for steelhead by multiple intensive  
16 activities related to agriculture, recreation and  
17 residential development?

18 A Yes.

19 Q But surface water diversions and groundwater  
20 diversions were not considered a high threat for Big Sur  
21 River, isn't that true, by NMFS?

22 By the way, NMFS is N-M-F-S?

23 A Yeah, NMFS, NOAA Fisheries.

24 Q NOAA Fisheries and N-O-A-A Fisheries. The common  
25 acronym for National Marine Fisheries Service.

1 A I reviewed this table. I don't think I would  
2 necessarily agree with it in the zone where groundwater  
3 pumping is proposed. But certainly in the remainder of  
4 the habitat I think it's an accurate characterization.

5 Q And this chart was prepared by NMFS during the period  
6 that the El Sur Ranch was pumping groundwater; isn't that  
7 right? I mean, El Sur Ranch has been pumping groundwater  
8 for 60 years.

9 A That's true.

10 Q And this chart was prepared within the last 60 years?

11 A Definitely. I would assume it's been -- it was  
12 prepared within the last three years.

13 Q Thank you.

14 And isn't it true that the use of water scale and  
15 the magnitude of impacts of diversions on the Carmel River  
16 and the Pajaro and the Salinas River are simply not  
17 similar to the El Sur Ranch -- or not the El Sur Ranch --  
18 to the Big Sur River situation characteristics?

19 A I would say the magnitude of impacts associated with  
20 pumping in those other basins is not the same as in the  
21 Big Sur River. The Big Sur would have a lower impact  
22 associated simply because there's still flow that --  
23 inflow that at times exceeds the diversion. And it's not  
24 true of these other streams.

25 Q So these other streams are really not directly

1 comparable to the Big Sur River watershed; isn't that  
2 true?

3 A No, I wouldn't say that. I think if you look at the  
4 lower Big Sur River as a one end of the spectrum of how  
5 groundwater affects steelhead streams, that there would be  
6 definite similarities. Certainly, you know, you could go  
7 and compare at a certain point in time or a certain period  
8 in time and location on the Carmel and it would match very  
9 closely to what's occurring on the Big Sur.

10 Q Now, would you describe what you think those accurate  
11 comparisons are, please?

12 A Well, I discussed this a little bit in response to  
13 Fish and Game's questions. But there is a gradient of  
14 impact in the Carmel River every year, and that gradient  
15 moves. In other words, the stream usually starts to dry  
16 up in the lowermost reaches and then continues to flow for  
17 a significant period of time but at much lower rates  
18 because the groundwater extraction is affecting the stream  
19 well upstream of the point where the pumps are. And so  
20 you can often see a situation where there might be ten  
21 cubic feet per second at what's called the narrows, which  
22 is about nine miles upstream. There might be ten cubic  
23 feet per second there. But then by the time you got down  
24 to the lowermost USGS gage in that system, you might have  
25 a half of a cubic foot per second. So you can walk

1 upstream in that reach and observe areas that look very  
2 similar in terms of the data that was collected by Dr.  
3 Hanson in terms of how the two -- and the two compare  
4 fairly closely in those stretches.

5           Now, on the Carmel, the ultimate result of this  
6 is that because groundwater extraction's so much higher  
7 than it is on the Big Sur, the stream dries up all the way  
8 up to this six-mile demarcation line.

9 Q    Isn't it true that the low DO that you testified about  
10 that occurs in the Carmel River in isolated pools has more  
11 to do with the photosynthesis and growth of algae in those  
12 pools than it does with inflow of underlying groundwater?

13 A    Has more to do, no. No, it's directly one and the  
14 same, because the flow in the river over riffles in  
15 particular stimulates algal production, and there's  
16 production of algae along the entire reach.

17 Q    Of which river are you speaking of?

18 A    Both rivers.

19           All the central coast streams have abundant  
20 periphyton. If they don't, there's something wrong with  
21 them.

22 Q    Where the river flows over riffles it gains oxygen;  
23 isn't that true?

24 A    Yes, it gain oxygen over riffles in response to really  
25 two basic factors:

1           That's the physical aeration of the water itself.

2           But then there's also the fact that during the  
3 daytime the algae are producing more oxygen than they use.  
4 So the oxygen levels increase during the daytime.

5           And so when the groundwater -- when the underflow  
6 is drawn out of the stream, you actually draw this  
7 oxygenated water out of the stream itself. And that can  
8 reduce the dissolved oxygen at that point and for points  
9 downstream.

10           And then if the reduction in flow is significant  
11 enough, in other words if the stream actually begins to  
12 dry up, pools tend to remain. But the shallower sections  
13 of the stream dry up. Then that algal production is no  
14 longer producing oxygen to the benefit of the stream.  
15 It's actually trying its best to survive, and so it's  
16 perspiring even more than it would normally do at night.  
17 And in those situations, we see severe drops in DO in the  
18 Carmel River and also in the Big Sur River.

19 Q       Did you see any algal blooms or algal growth that you  
20 thought depleted oxygen in Big Sur River personally?

21 A       Not during my one-day visit in the winter, no. But I  
22 grew up on the Monterey Peninsula and spent a lot of time  
23 in the Big Sur River as a child, and I can remember  
24 actually playing in the river and covering myself with  
25 algae during some summers.

1 Q Did you measure DO in the river on those occasions?

2 A No, not at that time.

3 Q Thank you.

4 You also testified in your direct that you  
5 thought that there had been a -- as you reported, the  
6 CEMAR report or publication as reporting that there has  
7 been a, in quotes, "substantial evidence exists that a  
8 significant decline in abundance of steelhead has  
9 occurred" on the big Sur; is that correct?

10 A That was their characterization, that's correct.

11 Q And specifically you referenced Table 3 of their  
12 report?

13 A Yes, I believe so.

14 Q I provided you with an excerpt, which is not on this  
15 page.

16 SENIOR STAFF COUNSEL MAHANEY: Ms. Goldsmith,  
17 before you move on, from the chart, that is, which you  
18 identified as ESR 45 --

19 MS. GOLDSMITH: Thirty-four.

20 SENIOR STAFF COUNSEL MAHANEY: I just wanted to  
21 clarify that.

22 MS. GOLDSMITH: Actually, no, that's not true.  
23 This is 35, because it's a compilation from various parts  
24 of the threats assessment. The threats assessment is  
25 Exhibit 34.

1 SENIOR STAFF COUNSEL MAHANEY: So this is a  
2 summary that --

3 MS. GOLDSMITH: This was created as a  
4 compilation. It's a separate exhibit.

5 SENIOR STAFF COUNSEL MAHANEY: Now, the ranch has  
6 already submitted their exhibits in their case in chief.  
7 Are you proposing these as new exhibits or --

8 MS. GOLDSMITH: Yes, I am.

9 SENIOR STAFF COUNSEL MAHANEY: And you've already  
10 done your case in chief and offered your exhibits into  
11 evidence. We are not yet to rebuttal stage.

12 MS. GOLDSMITH: I don't believe that it's  
13 improper to offer exhibits in the cross-examination.

14 SENIOR STAFF COUNSEL MAHANEY: If these are new  
15 exhibits that the other parties have not seen --

16 MS. GOLDSMITH: We have them for you.

17 SENIOR STAFF COUNSEL MAHANEY: They may wish an  
18 opportunity to review them.

19 But are they summary exhibits of -- are they  
20 summaries of previously submitted exhibits?

21 MS. GOLDSMITH: Well, the two exhibits that we've  
22 talked about so far -- the report of flow on the Big Sur  
23 River is part of data that was I believe part of the  
24 Board's exhibits as the USGS gage records.

25 SENIOR STAFF COUNSEL MAHANEY: Okay.

1 MS. GOLDSMITH: This has already been -- this --

2 SENIOR STAFF COUNSEL MAHANEY: I understand this  
3 was ESR 34. What I don't fully understand is how the  
4 difference is between this and the exhibit that was  
5 submitted as ESR 34. That's the clarification I'm asking  
6 for.

7 HEARING OFFICER DODUC: Ms. Teeters, do you have  
8 something to add?

9 MS. TEETERS: Yes. I would just like to tell Ms.  
10 Goldsmith that we started with Exhibit --

11 HEARING OFFICER DODUC: Tell me.

12 MS. TEETERS: -- 44 today, not 34.

13 MS. GOLDSMITH: I'm sorry.

14 MS. TEETERS: Yes. But this is to clarify --

15 MS. GOLDSMITH: But this is 34.

16 MS. TEETERS: And the previous exhibit regarding  
17 flows is data taken from -- that can be taken from Mr.  
18 Dettman's own exhibits, like a 980-page exhibit that are  
19 USGS.

20 MS. GOLDSMITH: And they're offered so when you  
21 review the record, you have handy material in one place.

22 HEARING OFFICER DODUC: So in other words, these  
23 exhibits are summaries of previously submitted testimony  
24 and exhibits?

25 MS. GOLDSMITH: These two are. The next one may

1 not be. The next one is -- I have handed Dr. Dettman --  
2 or Mr. Dettman a copy of his CEMAR report that he  
3 references.

4 HEARING OFFICER DODUC: Well, I'm going to go  
5 ahead and allow you to proceed, Ms. Goldsmith. And we'll,  
6 I'm sure, hear objections at the end of your  
7 cross-examination.

8 MR. LAZAR: Ms. Doduc, if I might interject.

9 HEARING OFFICER DODUC: Mr. Lazar.

10 MR. LAZAR: We would like to object to exhibits  
11 for the reason that they have not been submitted today  
12 beyond them being merely summaries or rehashes or  
13 reconfigurations of previous data. We would object in  
14 that case.

15 HEARING OFFICER DODUC: So noted.

16 MR. LAZAR: Thank you.

17 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
18 This is Larry Lindsay. Let me understand, this exhibit  
19 that you first showed, what exhibit is this one?

20 MS. GOLDSMITH: This would be Exhibit 44.

21 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
22 And where did it come from?

23 MS. GOLDSMITH: Well, it's taken from the USGS  
24 gage data that has been submitted.

25 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:

1 By Mr. Dettman?

2 MS. GOLDSMITH: No, by both counsel on CBD and  
3 also by the staff.

4 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
5 Well, was that submitted exactly like this or was this 900  
6 pages of data?

7 MS. GOLDSMITH: When CBD did it, it was 900  
8 pages.

9 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
10 But it wasn't this chart?

11 MS. GOLDSMITH: No, it was not this chart.

12 MR. LAZAR: We are not positive about the  
13 authenticity of this because it hasn't been authenticated

14 HEARING OFFICER DODUC: So noted.

15 MS. GOLDSMITH: Well, the next one I wanted to  
16 have introduced.

17 BY MS. GOLDSMITH:

18 Q Mr. Dettman, you referred to the CEMAR report -- CEMAR  
19 2008 report. And you relied on that from your testimony  
20 on both direct and today and your oral testimony.

21 And I handed you an about two-page thick report  
22 and asked you whether or not that is the CEMAR report that  
23 you referred to.

24 A Well, not this specific one but an uncontroverted one.

25 Q Yes, I printed it out.

1 I've also handed you a much shorter excerpt from  
2 the CEMAR report. And I'd ask you if it looks as though  
3 it's an accurate extraction of a portion of the CEMAR  
4 report that deals with introduction methods and  
5 description of the ?? and Big Sur River and also the Table  
6 3 that you referred to? Is that correct?

7 A Yes.

8 MS. GOLDSMITH: I'd like it marked for  
9 identification. I believe it would be next in order and  
10 would be 46.

11 These -- I don't know whether or not my assistant  
12 has distributed them. But I think either has or is about  
13 to.

14 (Whereupon the above-referenced document  
15 was marked ESR-46 for identification.)

16 MR. LAZAR: This is a new exhibit?

17 MS. GOLDSMITH: Well, it's the CEMAR report to  
18 which Mr. Dettman referred, yes. I'm not asking for  
19 admission at this point.

20 BY MS. GOLDSMITH:

21 Q But I did ask you whether or not it appears to be an  
22 accurate extraction --

23 A It does appear to be accurate.

24 Q -- of the relevant sections that you looked at?

25 A Yes.

1 Q And you cite the CEMAR statement that there's been a  
2 significant decline in steelhead. Is that your opinion?

3 A I cited the CEMAR report as a reference. They  
4 characterized the situation as if there had been a  
5 substantial decline. I haven't personally sampled habitat  
6 upstream of the zone of influence or VT-1 or upstream of  
7 Andrew Molera State Park. So I can't really form an  
8 opinion about that reach. But based on the population  
9 data collected by Dr. Hanson and Robert Titus in 1994, I  
10 would form an opinion that at least in the lower one-mile  
11 reach that the population seems to be extremely low.

12 Q But that's not the same thing as saying there has been  
13 a decline; isn't that right?

14 A Well, I think if the only data that anyone has is 1994  
15 and Dr. Hanson's report, it looks to me to be a decline in  
16 the comparative two time periods.

17 Q But Mr. Titus and Dr. Hanson did not sample the same  
18 areas; isn't that true?

19 A Not identical, that's correct.

20 Q Or the same years?

21 A True. Dr. Titus sampled in 1994.

22 Q Isn't it true that nowhere in the CEMAR report does it  
23 state that there's been a significant decline in abundance  
24 of steelhead in the Big Sur River?

25 A No, I don't believe so. It does say -- this is the

1 information that I used. The Table 3 under the Big Sur  
2 River, roe, if you look at the heading Evidence of  
3 Decline, it says Y. And the Y means, yes, there has been  
4 substantial evidence of a decline. So that's what I use  
5 in my testimony.

6 Q But there's no discussion in the CEMAR report as to  
7 what the evidence is behind the, quote, Y - that's the  
8 letter Y - isn't that true?

9 A That's true. Yes, it was primarily a status review;  
10 in other words, what's the best information available  
11 right now as to what the population is like.

12 Q So it's pretty cryptic in terms of how it arrived at a  
13 Y, wouldn't you agree?

14 A Yes.

15 Q And isn't the only reference that single table?

16 Now, if you look at what the text was of the  
17 CEMAR report, isn't it true that the only reference in the  
18 text of any problems is the "from the 2003 Big Sur River  
19 Steelhead Enhancement Plan prepared by Duffy for the  
20 California Department of Parks and Recreation"?

21 A I'll agree to that, yes.

22 Q And that's at -- and you're familiar with the Duffy  
23 report. You cited it; right?

24 A Yes.

25 Q And both CEMAR and the Duffy report report basis for

1 the conclusion that there might be problems - neither of  
2 them says decline - problems on the Big Sur; isn't that  
3 right?

4 A I think in a general way they're equating problems  
5 with decline.

6 Q And the reasons that Duffy gives for --

7 HEARING OFFICER DODUC: Mr. Lazar, do you have a  
8 question?

9 MR. LAZAR: Why is the clock stopped?

10 STAFF GEOLOGIST MURPHEY: I'm sorry.

11 HEARING OFFICER DODUC: And how long has it been  
12 stopped?

13 MR. LAZAR: I think it was at the point we were  
14 doing objections to the exhibits.

15 BY MS. GOLDSMITH:

16 Q Isn't it true that's the only two factors that Duffy  
17 sites.

18 HEARING OFFICER DODUC: Hold on, hold on.

19 STAFF GEOLOGIST MURPHEY: How about five minutes.

20 HEARING OFFICER DODUC: Let's go ahead and reduce  
21 that by five minutes.

22 BOARD MEMBER HOPPIN: Or grant a five-minute  
23 extension.

24 HEARING OFFICER DODUC: Thank you.

25 BY MS. GOLDSMITH:

1 Q But isn't it true that the only two problems that are  
2 mentioned relate to, first of all, recreational activities  
3 in the river and, second of all, blockage of a natural  
4 barrier up in the Julia Pfeiffer Park?

5 A I think that's correct. However, I'm not -- I don't  
6 believe that it was Denise Duffy's objective to speculate  
7 or figure out whether there might be other problems. Most  
8 of the work she was doing was related to -- ultimately to  
9 the restoration project.

10 Q That may be true. But you didn't cite any other  
11 sources, did you?

12 A Sources for what?

13 Q Your conclusion that -- or your statement that there's  
14 been a substantial decline in population.

15 A Well, yes, I stated that the data that Dr. Hanson  
16 collected compared to the data collected by Fish and Game  
17 in 1994 that states there's been a substantial decline.

18 Q Which we've discussed.

19 But neither of those factors has anything --  
20 well, neither of the factors have -- either Dr. Titus  
21 upstream by 2,000 feet or Duffy in ESR-34, the  
22 recreational and blockage upstream of the Julia Pfeiffer  
23 State Park, has anything to do with the El Sur Ranch down  
24 at the very bottom, does it?

25 A Not necessarily.

1 Q Not necessarily I'm right or not necessary I'm wrong?

2 HEARING OFFICER DODUC: Ms. Goldsmith, let him  
3 answer the question, please.

4 MS. GOLDSMITH: I want to understand his answer.

5 MR. DETTMAN: Not necessarily, because in 1994  
6 when Titus was doing his work, there was actually very  
7 little pumping going on at El Sur Ranch. It was almost as  
8 if they had the pump shut down in some of the periods that  
9 he was there. So it could be that the reason Titus saw  
10 more fish upstream or downstream or in the reach is that  
11 the impacts were lower in that year. So I wouldn't  
12 necessarily say that -- well, I wouldn't --

13 BY MS. GOLDSMITH:

14 Q This is pretty speculative, wouldn't you agree?

15 A Yeah, that's true. I'm an expert, so I'm allowed to  
16 speculate.

17 Q Well, you're allowed to give an opinion. I don't know  
18 that you're allowed to speculate. We'll move past that.

19 In the CEMAR report though also quotes a 1981  
20 memorandum by DFG stating that the lower seven miles of  
21 the stream from the state park to the ocean "support a  
22 substantial run of steelhead." This is in 1981. This is  
23 in the CEMAR report. Isn't that right?

24 A Can you show me where that is and what page?

25 Q Well, there's only like one page on the Big Sur. If

1 you turn to Big Sur --

2 MR. LAZAR: Just for the record, no one else has  
3 a copy of this.

4 MS. GOLDSMITH: Everybody has a copy of this.

5 MR. LAZAR: Oh, we do. Okay.

6 MS. GOLDSMITH: It's on page 167.

7 BY MS. GOLDSMITH:

8 Q A 1981 memo summarized conditions in the Big Sur  
9 watershed. "The clean free-flowing waters provide ideal  
10 conditions for natural steelhead spawning. The lower  
11 seven miles of stream from the state park to the ocean  
12 support a substantial run of steelhead. However, fish  
13 migration above the park is blocked by a 26-foot barrier  
14 in boulders and impacted gravel." That's a quote they  
15 cite, DFG 1981.

16 A Yeah, I think this language is being used to  
17 characterize the impacts of the barrier more than it is to  
18 characterize the situation below the barrier.

19 Q And the 2010 Titus report that he submitted as  
20 DFG-T-3, I believe it is, states that the river is  
21 continuing to support a healthy steelhead population;  
22 isn't that right?

23 A I don't doubt that he said that. I don't see there's  
24 a lot of evidence for that.

25 Q And isn't it true that Duffy, having done a snorkel

1 survey and looked at the habitat and whatever the focus  
2 was, you'd agree that the snorkel and that the habitat did  
3 a fairly good description of steelhead population  
4 dynamics?

5           Isn't it true --

6 A    Excuse me. Who was doing that?

7 Q    Duffy. This is ESR-34. This is the Duffy report that  
8 you cited in your testimony.

9 A    I think the Duffy report was primarily geared towards  
10 describing the habitat steelhead use. I don't -- in fact,  
11 I think there was a disclaimer in her report about whether  
12 or not it represented true population numbers. So I think  
13 that's an issue that --

14 Q    Well, the question is not going to population numbers.

15           However, isn't it true that Duffy reported that  
16 the steelhead in the Big Sur River leave the stream, go to  
17 the ocean after generally about one year in the stream?

18 A    Yes, that seems to be a characteristic of those  
19 fish --

20 Q    And didn't Duffy report that food does not appear to  
21 be a limiting factor?

22 A    Well, as I said before, food limitation and growth has  
23 a lot to do with the population density. So if there's  
24 very few fish in a population, the low amount of food can  
25 actually produce relatively good growth. So if we have a

1 case here where there are relatively few fish, we would  
2 expect them to grow rapidly, even perhaps in the face of  
3 somewhat at times deleterious conditions.

4 Q Isn't it also true you testified in your oral  
5 testimony here this morning that the snorkel surveys that  
6 Duffy did in the report that's ESR-34 covered a period --  
7 covered a reach from the mouth of the river upstream?

8 A I believe that's true.

9 Q Isn't it true that there's nowhere in the Duffy report  
10 that identifies where the snorkeling occurred or whether  
11 or not snorkeling included the lagoon?

12 A I don't remember.

13 Q It will speak for itself.

14 Now, assuming just for the sake of argument,  
15 because I don't necessarily agree, that the steelhead  
16 population in the Big Sur River has declined, isn't it  
17 true that there have been significant fluctuations in the  
18 ocean conditions that have affected salmonid populations  
19 generally over the last, say, 20 years?

20 A Yes, definitely.

21 Q And is there any reason that those conditions wouldn't  
22 affect steelhead survival as well?

23 A The conditions wouldn't affect steelhead survival?

24 No. I would expect the ocean conditions to  
25 affect steelhead survival.

1 Q Thank you.

2 I'd like to turn to your discussion of the impact  
3 of diversions on surface water. And in your testimony,  
4 and throughout your testimony, you've provided your  
5 opinion on the effect of El Sur Ranch pumping on the  
6 surface discharge of the Big Sur River?

7 A Potential effect, that's correct.

8 Q And you've stated that El Sur Ranch's proposed maximum  
9 daily diversion of around 5.84 cfs carries with it a  
10 drying stream up in the lower Andrew Molera State Park  
11 reach, isn't that right?

12 A That's true.

13 Q Are you aware of any evidence that the Big Sur River  
14 has dried up in the vicinity of the El Sur Ranch pumps?

15 A Yes.

16 Q And would you tell me what that is?

17 A There was -- and I can't remember the fellow's name  
18 now. But there's a letter somewhere in the record  
19 referencing conditions in 1990, I believe, which was a  
20 critically dry year, and that the stream had dried up in  
21 that year and the pumps were running.

22 Q So you have no personal knowledge of the Big Sur River  
23 drying up at all, ever, other than that one incident?

24 A Well, it came very close in 2007. So those two years.

25 Q Now, in 1990 isn't it true that the State Department

1 of Parks and Recreation was conducting a streambed  
2 excavation well above about -- 3,000 feet above where the  
3 Big Sur -- where the El Sur Ranch wells are located up  
4 around that very sharp right-hand turn of the river near  
5 the Andrew Molera State Park?

6 A I'm familiar with that location. I am not certain  
7 that it was 1990. If you say so, I'll forsake of a  
8 discussion.

9 Q And isn't it true that Appendix P of the 2005 SGI  
10 report is a memorandum that was produced by the Department  
11 of Fish and Game reporting on that particular drying  
12 incident?

13 A I have not read that -- that particular report.

14 Q Would you be surprised to find out that the  
15 de-watering of the stream continued only 600 feet on  
16 average below that particular excavation site?

17 A Well, I'm having a hard time here because I'm not sure  
18 about what the setting was. But as you've described it,  
19 and I think Mr. Hill described it too, they were  
20 excavating the streambed; is that correct?

21 Q That's correct.

22 A So if the flows were low, it certainly could be  
23 possible that this excavation would interrupt the flow and  
24 redirect it during that period of time, and perhaps the  
25 section of the stream dried up.

1 Q Would you be surprised to find out that there's  
2 absolutely no evidence that the stream dried up in the  
3 vicinity of the Big Sur wells?

4 A In 1990?

5 Q Yes.

6 A I would be surprised, yes.

7 Q Now, in your testimony concerning the potential  
8 impacts of pumping, you state that your conclusions  
9 concerning the effect of El Sur Ranch pumping on the  
10 hydrology of the Big Sur River are based on your  
11 assumption that the applied diversion rate would decrease  
12 river flows by a direct one-to-one relationship; isn't  
13 that right?

14 A That's correct. My analysis was -- as I characterize  
15 it as a potential, that's correct.

16 Q And this is because of your belief that the  
17 relationship -- as you stated in your footnote 4 on page  
18 8, is that the relationship between groundwater pumping  
19 and surface water discharge is not well understood?

20 A I wouldn't characterize it as a belief. But if you  
21 wish to do so, that's fine.

22 Q Well, you said -- your footnote 4, which I'll quote,  
23 says, "This assumption may be support by detailed  
24 hydrologic information in Hanson (2005, 2007, and 2008)  
25 and SGI (2005 and 2008). And additional review of this

1 information is planned prior to my oral testimony in June  
2 2011."

3 A That's correct.

4 Q So in forming your opinion, you didn't review the SGI  
5 analyses?

6 A I did review the work that they did and I listened to  
7 the testimony that had been put forth.

8 Q Have you changed your assumption?

9 A No. Only slightly. I now believe that it's a  
10 substantial fraction. I think there's a great deal of  
11 uncertainty associated with what that relationship is.  
12 And I think that's in part due to the way that the pump  
13 tests were configured. The duration of the pump test did  
14 not match up with the typical production scenario in those  
15 months that would be associated with irrigating 250 acres  
16 of pasture. The demand was much lower.

17 So the patterns that we're seeing are what they  
18 were. But it's my opinion, my belief that unless someone  
19 can show that there's a significant source of water from  
20 somewhere, that ultimately the diversions through the El  
21 Sur Ranch pumps will directly correspond to some reduction  
22 in surface flow or subsurface flow in the river.

23 Q Well, we're talking about surface flow, because I  
24 believe that's what your testimony dealt with.

25 A They are both related.

1 Q On a one-to-one basis?

2 A The diversion of water through the wells at times is  
3 probably completely surface flows and other times it's  
4 partially surface and partially subsurface. But my point  
5 is is that by the time you get to the end of the reach,  
6 the lagoon, so to speak, that unless there's water coming  
7 from somewhere else that has not been described, based on  
8 what I've heard, that there would be a one-to-one  
9 correspondence between diversions through the wells and  
10 diversions from the river.

11 Q So that wouldn't necessarily reduce the riffles by one  
12 to one, would it?

13 A Wouldn't reduce what?

14 Q Flow in the riffles above the lagoon one to one.

15 A No. That's -- I mean, the work that was done by SGI  
16 and Hanson shows that that's a very complicated situation.  
17 No one's disagreeing with that. So you may see in some  
18 locations no change. You may see some change in another  
19 one.

20 Q Now, you're not a certified hydrogeologist?

21 A I'm not a certified hydrogeologist. But in 17 years  
22 of working with this same issue on the Carmel River, I've  
23 seen this same process occur year after year in location  
24 after location. So --

25 Q On the Carmel?

1 A On the Carmel River, that's true.

2 Q So you have the same general -- I won't go there.

3 My 33 years of practice as a lawyer concerning --  
4 have always given me a great deal of understanding --

5 HEARING OFFICER DODUC: Ms. Goldsmith, do you  
6 have a question?

7 MS. GOLDSMITH: -- to be a hydrologist.

8 MR. LAZAR: Yeah, I would object.

9 HEARING OFFICER DODUC: Please also note your  
10 remaining time, Ms. Goldsmith, as you're making these  
11 observations.

12 MS. GOLDSMITH: I'm working on it.

13 BY MS. GOLDSMITH:

14 Q But you did review the EIR?

15 A I didn't review all of the EIR.

16 Q The draft EIR you reviewed?

17 A I looked at the draft EIR. I concentrated on those  
18 sections that had to do with biology. I did not have a  
19 lot of time. Remember, I started on April 15th or so.

20 Q And do you understand that PBS&J, the environmental  
21 consultant for the Board, did have qualified  
22 hydrogeologists looking at the same data that SGI looked  
23 at?

24 A I would expect so, yes.

25 Q And isn't it true that they also agreed with the same

1 conclusions that SGI came up with, that is, that the  
2 maximum of depletion from surface flow is 30 percent of  
3 the pumping rate?

4 MR. LAZAR: Objection. The evidence should speak  
5 for itself here.

6 HEARING OFFICER DODUC: Ms. Goldsmith, please  
7 rephrase the question.

8 BY MS. GOLDSMITH:

9 Q So I take it you're not aware that the qualified  
10 hydrogeologists of PBS&J agreed with the conclusions of  
11 SGI that at most 30 percent of water pumped by the ranch  
12 comes from the surface flow?

13 A I think they were conclusions based on looking at the  
14 zone of influence as described by the hydrogeologists, did  
15 not consider potential pathways for that water that are  
16 above the zone of influence. If you examine the geology  
17 of that reach where we just described the bend in the  
18 river, there's actually bedrock on both sides of the  
19 stream at that location, which indicates to me that the  
20 stream is somewhat perched there and that it's possible  
21 that water could percolate around the "losing reach" and  
22 into the zone of influence and not affect the water depth  
23 of the zone of influence but provide water to that zone  
24 that's been pumped.

25 Q And this is your lay opinion?

1 A No, it's not my lay opinion.

2 Q This is your hydrologic opinion?

3 A Well, I've had a lot of experience working with  
4 hydrology. So although I'm not a hydrogeologist, I do  
5 feel qualified to talk about potential processes that may  
6 not have already been described. So that's what I'm  
7 doing.

8 Mr. Lindsay, would you put up on the screen  
9 figure 6 of CBD/CSPA Exhibit 11.

10 That's not it. You have to go to your exhibits.

11 MR. LAZAR: Which exhibit?

12 MS. GOLDSMITH: One hundred. Figure 6 is at PDF  
13 Page 27.

14 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
15 Thank you.

16 --o0o--

17 BY MS. GOLDSMITH:

18 Q Now, assuming that the findings of SGI and the CEQA  
19 consultant are correct, that at most 30 percent of the  
20 flows diverted by irrigation wells come from surface flow,  
21 these graphs would not be correct, would they?

22 A They would be different, that's true.

23 Q The top one would be described as the time when flows  
24 were equal to or greater than 3 percent of the diversion  
25 rate?

1 A Approximately, yes.

2 Q And the bottom one would be the time when flows were  
3 equal to or greater than about twelve percent?

4 A Uh-huh, roughly.

5 Q And both of these graphs assumed a diversion rate of  
6 5.84; isn't that right?

7 A That's correct.

8 Q And isn't it true that the average pumping rate during  
9 the summer is limited to 5.34 cfs?

10 A Over a 30-day period, I believe, yes.

11 Q And so these would overstate the impacts, these --

12 A If there wasn't a one-to-one relationship between the  
13 diversions --

14 Q Even if there were a one-to-one relationship. Because  
15 the flows that would be diverted or the diversion rate is  
16 less than 5.84, these would overstate the impact, wouldn't  
17 they?

18 A These do describe, as you've characterized, the 5.84  
19 diversion, that's correct. So they would overstate the  
20 duration of the -- or the width of each little year's bar  
21 there. In other words, they would be somewhat lower and  
22 contracted in time.

23 Q Wouldn't they also affect the height of those bars?

24 A Yes, yes.

25 Q Thank you.

1           And isn't it true that the average summertime  
2 pumping has historically been about 2.79 cfs, 3 cfs to be  
3 round?

4 A       What is that equal to in terms of annual? That's the  
5 number --

6 Q       No, I'm just talking about the average summertime rate  
7 of diversion over the past few years. And if you don't  
8 know, that's fine?

9 A       That average is if you take the entire year and divide  
10 it by --

11 Q       Why don't you take the summer.

12 A       Just the summer?

13 Q       Uh-huh. If you don't know, that's fine.

14 A       I don't know. I think it's -- well, I don't know  
15 specifically. I could look it up. More importantly, the  
16 average isn't so important in this case. It's what occurs  
17 over short durations of time. So you have to look within  
18 a month and actually look at the diversion rates that  
19 occurred on a weekly basis to make it --

20 Q       Uh-huh.

21 A       -- in the dry and critically dry years.

22 Q       But your graph then would not represent impacts from  
23 average pumping?

24 A       This represents pumping as it's described, which would  
25 be allowed under the permit, not which is what occurred

1 historically.

2 Q But isn't it true that historically there was  
3 absolutely no regulatory limit on what was pumped? I  
4 mean --

5 A I don't know.

6 MR. LAZAR: You're asking Mr. Dettman to draw a  
7 legal conclusion when he's not prepared. I object.

8 MS. GOLDSMITH: I can --

9 HEARING OFFICER DODUC: Hold on. One at a time,  
10 please.

11 Mr. Lazar.

12 MR. LAZAR: I said that asks Mr. Dettman to draw  
13 a legal conclusion, to which I object.

14 HEARING OFFICER DODUC: Rephrase the question if  
15 you can, Ms. Goldsmith.

16 BY MS. GOLDSMITH:

17 Q Are you aware of any regulatory limits on the pumping  
18 by El Sur Ranch at this point or --

19 A Not from the standpoint of State Water Control Board.  
20 But there are limits that would be placed based on Fish  
21 and Game Code sections.

22 Q Have those been placed, to your knowledge, in the  
23 past?

24 A I don't believe so, no.

25 Q So the historical pumping rate is essentially what one

1 might expect with unconstrained pumping; isn't that right?

2 A No. No, unconstrained pumping would be 5.84. It  
3 would represent both of the pumps operating at the same  
4 time.

5 Q So your charts in Figure 6 are purely theoretical; is  
6 that right?

7 A No, they're not theoretical. They describe the likely  
8 impacts on flow if the pumps were producing at 5.83 -- or  
9 84.

10 Q So they're speculative?

11 A No. They're no more speculative than what occurred  
12 normally in the EIR.

13 Q Now, I'd like to turn to your lagoon opening and  
14 closure.

15 HEARING OFFICER DODUC: Ms. Goldsmith, I remind  
16 you of the time you may need for Mr. Berliner.

17 MR. BERLINER: If I run out, I run out.

18 MS. GOLDSMITH: I believe I'm going to be close.

19 HEARING OFFICER DODUC: Okay.

20 BY MS. GOLDSMITH:

21 Q Turning to your lagoon opening and closing report,  
22 which you've testified so I don't need to ask you --

23 MR. LAZAR: I'm sorry, Ms. Goldsmith. Which  
24 opening and closing report are you referring to?

25 MS. GOLDSMITH: You submitted it.

1 MR. LAZAR: Are you referring to one of our  
2 exhibits?

3 MS. GOLDSMITH: Yes, I am.

4 MR. LAZAR: Okay. I just wanted to clarify.

5 I believe Ms. Goldsmith is actually referring to  
6 Exhibit CSPA/CBD --

7 MS. GOLDSMITH: -- 104.

8 MR. LAZAR: -- 104. Thank you.

9 BY MS. GOLDSMITH:

10 Q You've testified today that lagoons are of critical  
11 importance to steelhead?

12 A Yes.

13 Q And you've also testified --

14 A And other fishes, too.

15 Q Okay. And you've also testified that most of the  
16 steelhead streams south of San Francisco have closed  
17 lagoons; is that right? Certainly Carmel has closed a  
18 lagoon?

19 A Yes. Most of them I'm aware of, yes.

20 Q And the main concern related to lagoon closure is that  
21 without an outlet, temperatures rise; is that right?

22 A No. Without inflow the conditions in the lagoon often  
23 become anoxic and unsuitable for fish. It's not so much  
24 they close. It's that once they do close, most of these  
25 systems have very low inflow. And there are certain

1 exceptions. Most of them have very low inflow. And that  
2 risk can result in the conditions in the lagoon  
3 particularly in the late summer and the early fall  
4 becoming unsuitable for steelhead.

5 Q Stratified?

6 A Stratified, de-oxygenated, high levels of carbon  
7 dioxide, high temperatures.

8 Q Thank you.

9 But in the three years of measurement of habitat  
10 conditions on the Big Sur River lagoon, under both open  
11 and closed conditions, isn't it true that Dr. Hanson's  
12 studies found that the lagoon habitat remains suitable  
13 regardless of pumping?

14 A That's true, yes.

15 Q And now let's assume that the status of the lagoon as  
16 open or closed is an issue to be concerned about here.

17 A It's the primary issue for the lagoon.

18 Q Let's look at the testimony that you've submitted.

19 You've basically stated that your recommendation  
20 in order to maintain an open lagoon is that flows be  
21 between 10 and 15 cfs; is that right?

22 A For the lagoon that appears to be the levels --

23 Q Now, those --

24 A -- based on the limited reconnaissance that I did.

25 Q Right. And those flows are flows as measured at the

1 USGS gage at the Julia Pfeiffer State Park, the Big Sur  
2 gage; isn't that right?

3 It's right.

4 A Okay.

5 Q It's in your testimony.

6 MR. LAZAR: The lower gage, the new gage.

7 MS. GOLDSMITH: No, it's not.

8 HEARING OFFICER DODUC: Let's move on and ask  
9 your question.

10 BY MS. GOLDSMITH:

11 Q All right. So you looked at 16 photographs ranging  
12 over a 40-year time span?

13 A That's correct. I looked at all the photographs I  
14 could find in the short time I had available.

15 Q And that was 16 and they range over 40 years.

16 But you only found a single one where you  
17 determined that the lagoon had closed. And that was for  
18 October 2004; isn't that right?

19 A That's correct.

20 MS. GOLDSMITH: Could you bring up PDF 16 of this  
21 CSPA/CBD Exhibit 104.

22 --o0o--

23 MR. DETTMAN: Well, I'll qualify. The 1994 it  
24 appeared to me that the lagoon probably was closed but I  
25 couldn't tell specifically from the photograph. I'm

1 referring to my Table 1 on page 4, where it's the status  
2 of the lagoon opening. And there's one that's closed and  
3 there's one that's called "open/closed?"

4 BY MS. GOLDSMITH:

5 Q Would you go to this Exhibit on page 2, please -- PDF  
6 page 2, the last paragraph.

7 So it says, "Review of daily discharge records at  
8 USGS Gage 11143000 showed that the lagoon was usually open  
9 when seven-day long discharge at the USGS gage was greater  
10 than 8 to 12 cfs." Does that recollect?

11 A That's fine.

12 Q You did rely on the USGS gage up at the Big Sur?

13 A I did. It was the only one available.

14 Q So what we have here is we have a single photograph  
15 that you can correlate with flows at the USGS gage, and  
16 that was the entire basis for the lagoon opening and  
17 closing recommendation that you made; is that right?

18 A No. No, I also considered the flows that were  
19 associated with the lagoon being open. And recognize that  
20 there's -- I said this morning there's a great deal of  
21 uncertainty surrounding this issue. It's not like on the  
22 Carmel River where we have 18-years worth of detailed  
23 measurements and observations at the mouth so that we can  
24 describe the relationship between flow and whether the  
25 lagoon is open or closed. We have a very good

1 relationship there. We know that it takes basically 20  
2 cubic feet per second in that system.

3 Q Well, and that has a bedrock lip, doesn't it?

4 A Pardon me?

5 Q That lagoon on the Carmel has a bedrock lip?

6 A Not that -- not that affects this process. The lagoon  
7 lip is 80 feet deep.

8 Q Okay. So you looked at the flows when the lagoon was  
9 open?

10 A I looked at the flows when the lagoon was open and  
11 closed. And recognizing the title of this report is --  
12 it's basically a reconnaissance and level assessment. I  
13 would hope that there would be additional work done on  
14 this issue because it's an extremely important one and  
15 it's what makes the Big Sur River lagoon unique and  
16 different from most other lagoons in this part of the  
17 state.

18 Q Now, you also referenced in your report that you  
19 looked at the Hanson environmental report of 2007.

20 A I did.

21 Q Where he reports that the lagoon was open at flows  
22 above 11 cfs but closed when the flow declined to around 6  
23 cfs; is that right?

24 A Uh-huh.

25 Q But you didn't include anything in your testimony as

1 to whether or not the lagoon ever reopened or what the  
2 flows were at the time?

3 A I'm not sure that I knew whether it reopened or not.

4 Q If you had known, would you have included it?

5 A Yeah.

6 Q Now, I'd like to go very -- you saw grebes at the  
7 river mouth on April 29th?

8 A A large number, yes.

9 Q And those are a piscivorous species?

10 A They are.

11 Q Are they?

12 A They're very much so.

13 Q Wouldn't you expect to find them where there's fish?

14 A Well, I think that's the reason they were there.

15 Q So there were fish?

16 A There were fish.

17 Q And they're migratory too, right?

18 A I believe they are, yes.

19 Q And we don't know --

20 A They breed.

21 Q -- whether they would be there in the summer feeding  
22 on fish in the lagoon?

23 A No. No, we don't know that, that's true. That was in  
24 April. That's a period of time when the smolts migrate  
25 out to the ocean though.

1 Q Going back briefly to the DO issue, because you did --  
2 I don't know if you read the final Environmental Impact  
3 Report.

4 A I did not.

5 Q All right. Would it surprise you to find that PBS&J  
6 found there was no DO problem in the river when the flows  
7 were 10 cfs or above the USGS gage?

8 A Yeah, that would surprise me a lot.

9 Q Okay. Now, you also said -- you said in your  
10 statement that when there's a reduction in flow, there's a  
11 proportional reduction of habitat. Do you remember that?

12 A Yes.

13 Q And wouldn't that depend on the profile of the river?

14 A It does. But, you know, if you take all of the IFIM  
15 and PHABSIM curves and look at them in the range where  
16 it's from zero to some moderate number, it's a  
17 proportional relationship. It's almost like -- it's  
18 slightly curved because it is decreasing. But in that  
19 lower range of flows it's often times directly  
20 proportional.

21 Q So you're talking essentially about a curve that -- a  
22 flow curve that starts at zero, rises rapidly, and then --

23 A Flow versus habitat curve.

24 Q -- starts to --

25 A And they typically -- they don't look exactly like

1 these, this --

2 Q -- starts to --

3 A -- perimeter curve that we've seen. But the beginning  
4 portion looks similar and oftentimes they'll rise up,  
5 they'll peak, and then decline. And that's due to the  
6 fact primarily that at some flow level the water velocity  
7 across the stream is above the limit that fish can  
8 actually swim in for long periods of time.

9 Q Now, I have one last -- well, I have two last areas I  
10 want to talk to you about. One is your critical riffle  
11 survey, which is CSPA/CBD-103.

12 MS. GOLDSMITH: Now, would you put up that -- Mr.  
13 Lindsay, would you put up the next graph in my PowerPoint?

14 Thank you.

15 --o0o--

16 BY MS. GOLDSMITH:

17 Q This is a table from your critical riffle survey. Do  
18 you recognize it?

19 MR. LAZAR: I believe that's 103.

20 BY MS. GOLDSMITH:

21 Q It shows the channel widths and the percentages of the  
22 cross-section meeting the depth criteria; is that correct?

23 A Uh-huh.

24 Q Could you tell us your methodology for taking the  
25 transects?

1 A Yes.

2 Q First of all, were you alone?

3 A I'm sorry?

4 Q Were you alone?

5 A Yes. Although somebody came down to photograph me,  
6 which I thought was strange.

7 Q It wasn't us.

8 A I was -- I looked at these -- I started downstream and  
9 walked upstream and looked at all the riffles that I could  
10 characterize as being potentially a problem. This one in  
11 particular looked like it was the most critical.

12 Q This one being your waypoints 229 to 232?

13 A Yes, it's basically the upper end of the lagoon.

14 Q Thank you.

15 A And at that location I -- because it's a complex  
16 riffle, which means it has more than just one flow thread,  
17 in order to conduct this analysis, you have to lay  
18 transects -- more than one transect across the stream.  
19 You can't just lay one transect. So I proceeded to lay  
20 two transects across the shallowest portion of the crest  
21 of the riffle, and then take measurements along that  
22 transect at regular intervals.

23 Q What intervals did you use?

24 A One transect I think it was one foot and the other was  
25 two feet.

1 Q Is that the standard methodology for measuring  
2 riffles -- or measuring stream width under Thompson's  
3 criteria?

4 A There is no standard in terms of the distance between  
5 the measurement points. It's more important actually that  
6 you conduct an adjustment along the transect. I did this  
7 in this case where if you lay a stream transect across any  
8 crest of any riffle, there will be portions immediately  
9 upstream of that transect that are slightly deeper or  
10 shallower. And so when I do this method in this location,  
11 I decided to take those measurements slightly offset from  
12 the main transect line. So in my notes not only it's in  
13 the details here, but I took measurements slightly offset  
14 from that transect and the transect line if in my opinion the  
15 fish would have to negotiate that depth when it moved past  
16 the transect.

17 Q Are you saying that you took the deeper measurement  
18 rather than the more shallow?

19 A No, I took the shallow one.

20 Q Okay. And how did you record the measurements?

21 A On a notebook.

22 Q While you were standing in the middle of the stream?

23 A Yep.

24 Q And how did you measure the depth?

25 A With a standard weighting rod.

1 Q And you're confident you were accurate?

2 A Yeah.

3 Q You've done it a number of times?

4 A Well, I've done this hundreds of times.

5 Q But you didn't include your measurements in your  
6 testimony, did you?

7 A You mean the notebook?

8 Q Your actual measurements.

9 A I think they're written down.

10 HEARING OFFICER DODUC: Ms. Goldsmith, I'll  
11 remind you that actually your time is up.

12 MS. GOLDSMITH: May I have another ten minutes  
13 please?

14 HEARING OFFICER DODUC: And that will conclude  
15 your cross-examination of both witnesses?

16 MS. GOLDSMITH: That will conclude my  
17 cross-examination of both witnesses.

18 HEARING OFFICER DODUC: Thank you.

19 You may have ten minutes.

20 THE WITNESS: So I guess I didn't include those  
21 there then.

22 BY MS. GOLDSMITH:

23 Q But you did include your very detailed --

24 A I have a --

25 Q -- worksheet that's CSPA/CBD-102 at PDF 41 of how you

1 determined the flow.

2 A Oh, on that, yes.

3 Q Yeah. And, you know, my algebra teacher would have  
4 said, "Show me your work," and you certainly did. But you  
5 didn't on the transects?

6 A No. I think that -- I think there's a spreadsheet  
7 available that has the notes transcribed on to them.

8 MR. LAZAR: I believe the spreadsheet was  
9 submitted electronically to all -- to the applicant and  
10 all parties, because of its size.

11 MS. GOLDSMITH: I'm sorry. Did you have an  
12 objection?

13 MR. DETTMAN: I think there's a transcription of  
14 the notes on to an Excel spreadsheet. And I think that  
15 was submitted.

16 BY MS. GOLDSMITH:

17 Q I don't remember seeing that as an exhibit, sir.  
18 Could you point out the exhibit number?

19 HEARING OFFICER DODUC: Stop the time, Paul,  
20 while we do this.

21 SENIOR STAFF COUNSEL MAHANEY: Just to clarify,  
22 you're not talking about Attachment 1 of CSPA/CBD-102?  
23 Are you looking for something else? It's on the very last  
24 page.

25 MR. DETTMAN: The last page of 103?

1 SENIOR STAFF COUNSEL MAHANEY: 102.

2 Is that what you're looking for?

3 MS. GOLDSMITH: There was an enormous spreadsheet  
4 with all of the --

5 THE WITNESS: -- oh, USGS data?

6 MS. GOLDSMITH: -- USGS data.

7 MR. DETTMAN: Yeah, that's not that enormous.  
8 And you printed it out.

9 MS. GOLDSMITH: I wanted to see what you  
10 submitted. After having seen that, I didn't print  
11 anything else out.

12 HEARING OFFICER DODUC: All right. Let's get to  
13 that point.

14 MR. DETTMAN: I apologize. I guess there isn't a  
15 transcription of those notes. I apologize. I guess  
16 there's not a transcription of the notes. So I'd be more  
17 than happy to provide them.

18 BY MS. GOLDSMITH:

19 Q So we really don't have from your testimony any  
20 ability to regenerate what the exact transects looked like  
21 in terms of stream profile; isn't that right? I mean,  
22 without those measurements, how could we do that?

23 A True.

24 MS. GOLDSMITH: Now, I'd like you to put up -- go  
25 back to the cross-examination PDF.

1 Well, actually what I'd like you to do is put up  
2 CBD/CSPA-103 at PDF 3.

3 Then I'd like you to see if you can enlarge the  
4 area that's down in the lower right-hand corner.

5 --o0o--

6 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
7 Down here?

8 MS. GOLDSMITH: And I've passed out as part of  
9 the written material that I've provided to both the Board  
10 and to you, Dr. Dettman, and the attorneys here, basically  
11 a schematic of the area that's -- you need to move over,  
12 Larry. Bottom left.

13 And as large as you can make it without losing.

14 All I want --

15 MR. LAZAR: Was this a new exhibit?

16 MS. GOLDSMITH: Yeah, it is.

17 MR. LAZAR: This is our exhibit?

18 MS. GOLDSMITH: This is your exhibit.

19 But I did hand out a schematic which I would like  
20 identified as ESR-47.

21 But before we go to that --

22 MR. LAZAR: I'm going to strongly object to this.  
23 I have no idea what this is, and we've never seen it  
24 before.

25 MS. GOLDSMITH: That's true.

1 HEARING OFFICER DODUC: Let's go ahead, and let  
2 her conclude her questioning. And then we'll address your  
3 objection.

4 BY MS. GOLDSMITH:

5 Q Would you look at that hand drawn sort of a plan  
6 view -- cartoon plan view. And do you agree that that  
7 looks like a rough approximation of the general layout of  
8 that riffle that you visited on April 29th?

9 A Generally, yeah.

10 Q Okay. Now, you concluded that adult passage would not  
11 be met at 146 and you did identify two main channels, and  
12 those are the two outside channels on that -- ESR-47 would  
13 be the cartoon I just handed you?

14 A Yeah. On the schematic diagram it would be roughly  
15 equivalent to 6A to 6B and 1 to 2A --

16 Q Okay.

17 A -- roughly.

18 Q So isn't it true then that when fish are faced with  
19 multiple channels, they preferentially choose the one with  
20 the greatest flow and the depth for passage?

21 A Not necessarily. My work on Soquel Creek I actually  
22 studied -- and I only conducted Thompson criteria. But  
23 the only case I know of where anybody has actually tried  
24 to calibrate whether it works or not, and actually watched  
25 fish migrate up through the riffles at the same time that

1 I was doing the measurements. And much to my surprise,  
2 oftentimes the fish would just move up through the shallow  
3 section.

4 Q You were surprised because?

5 A I was surprised because the general thought is that  
6 they would move through the deepest section.

7 Q Thank you.

8 And if they choose one where they can't get  
9 passage, isn't there a phenomenon known as fallback where  
10 they retreat a little bit and then try it again?

11 A Yeah, in severe cases. Usually that's associated with  
12 some sort of physical either partial or complete barrier  
13 your, which I would not describe as critical riffle. But,  
14 yes, if they physically cannot get up through one threat  
15 of --

16 Q -- they'll go back to try --

17 A -- they'll go try somewhere else. I've often seen  
18 them try again.

19 Q Yeah. As long as it's not too long a delay --

20 A Yeah.

21 Q -- it's not as terrible a big deal.

22 So given your experience as a fishery biologist,  
23 is it your opinion that the transects you measured, that  
24 those would provide a barrier to adult migration of the  
25 flows you saw?

1 A I wouldn't call it a barrier. I would say it would be  
2 stressful for them to get upstream through those two  
3 sections, yes. And I was surprised because the flow was  
4 so high. And I think I identified this in my testimony as  
5 being the, quote, most critical riffle that I saw. And  
6 it's actually a location that needs probably some sort of  
7 treatment. If this was -- for example, this was on the  
8 Carmel River, we might do a mitigation or a restoration  
9 project at this location to try to reduce the amount of  
10 flow it takes to get upstream.

11 Q Now, going to your bypass recommendations. You  
12 endorsed a summer bypass flow of 40 cfs because, as you  
13 say, it's protective of juvenile life phases, quote,  
14 because it exceeds the typical flows in almost all  
15 summers.

16 MR. LAZAR: Where are you quoting that from?

17 MS. GOLDSMITH: That's at CBD/CSPA-100 at PDF 14.

18 THE WITNESS: No, my flow requirements was  
19 actually 15 to 20, as you recall, that I recognized --

20 BY MS. GOLDSMITH:

21 Q Well, it was 15 to 20 to keep the lagoon open. But  
22 your recommendation for summer flow was 40, wasn't it?

23 A No.

24 Q What is your summertime flow?

25 A Fifteen to 20.

1 Q All right.

2 A With those conditions, depending upon the chemistry in  
3 the lower river.

4 Q Because you recognize that at 40 cfs, which almost  
5 never occurs, the fishery wouldn't even be there, isn't  
6 that right?

7 A Well, keep in mind that fish respond to a wide variety  
8 of flows. Flow requirements are by their very nature  
9 meant to be conservative. In other words, you want to set  
10 them high enough that you don't have to worry about  
11 whether they're high enough once they've been set. And  
12 typically now there's a lot of monitoring that goes on.  
13 So, you know, it's a range of flows. And my flows I  
14 recognize are interim flows that I believe are protected.  
15 But this all needs to be revisited when Fish and Game  
16 completes their work.

17 MS. GOLDSMITH: That completes my  
18 cross-examination.

19 I would like to move into evidence ESR 44, 45,  
20 46, and 47, which are the hydrographs that we looked at,  
21 the compilation of the NMFS threat assessment taken from  
22 ESR 34, the excerpt from the CEMAR report that Dr. -- Mr.  
23 Dettman relied on, and the sketch -- the plans that he  
24 sketched that he testified was roughly descriptive of  
25 passage transect four that he reported --

1 HEARING OFFICER DODUC: It would be this one.

2 Let's hear from Mr. Lazar.

3 MR. LAZAR: Although I object to 44, 45, and 47,  
4 due to a lack of foundation, I object most strongly to the  
5 other lack of foundation presented for ESR 47, the  
6 so-called cartoon schematic.

7 HEARING OFFICER DODUC: This would be this one?

8 MR. LAZAR: Correct.

9 HEARING OFFICER DODUC: Okay. Let's hear from  
10 parties -- other parties if you have any comments or  
11 objections.

12 Fish and Game.

13 MR. TAKEI: Before I object, can I clarify,  
14 which -- the CEMAR was identified as which exhibit?

15 MS. GOLDSMITH: Forty-six.

16 MR. TAKEI: Forty-six.

17 Well, our primary objection is to 45. And it's  
18 primarily just because it isn't clear where the data was  
19 being pulled from. If you're able to identify where in  
20 the report you've compiled all this data, then I wouldn't  
21 object. I understand it's from the report. But there's  
22 areas throughout the report.

23 HEARING OFFICER DODUC: Right.

24 Let's give Ms. Goldsmith a chance to respond to  
25 that.

1 MS. GOLDSMITH: Sure. The NMFS threat  
2 assessment, ESR 34, from which 45 is taken, presents a  
3 number of different graphs for various parts of the state.  
4 We've not changed that. The colors are the same as are  
5 presented. The format is the same as was presented. The  
6 only thing we did was to pull from that report the rivers  
7 that Dr. Dettman had referred to.

8 HEARING OFFICER DODUC: Okay. Mr. Lazar.

9 MR. LAZAR: What Ms. Goldsmith is saying is not  
10 in evidence, and there has been a failure to authenticate  
11 these documents as well.

12 HEARING OFFICER DODUC: Any other objections from  
13 other parties?

14 Okay. Ms. Goldsmith, I'll give you the last  
15 opportunity again to testify on these exhibits.

16 MS. GOLDSMITH: The Big Sur hydrograph was taken  
17 from the data that we have.

18 SENIOR STAFF COUNSEL MAHANEY: Excuse me. I just  
19 want to clarify where that data came from.

20 MS. GOLDSMITH: It came from USGS web page. And,  
21 frankly --

22 SENIOR STAFF COUNSEL MAHANEY: What exhibit are  
23 you drawing from? Or are you just --

24 MS. GOLDSMITH: Yeah, I'm drawing from the data.  
25 And if the Board staff wants to go back and create this

1 data themselves, they certainly can. I simply printed it  
2 out.

3 HEARING OFFICER DODUC: And the data was  
4 submitted into evidence via --

5 MS. GOLDSMITH: -- by the staff.

6 SENIOR STAFF COUNSEL MAHANEY: No. Excuse me.  
7 And maybe, Larry, you'd want to address this? Can we just  
8 clarify whether this --

9 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
10 Let's go back to --

11 SENIOR STAFF COUNSEL MAHANEY: -- data -- what I  
12 am asking for is some clarification whether this time  
13 period was covered in the staff exhibits of the USGS data.

14 HEARING OFFICER DODUC: Actually before you do  
15 that, Larry, let's make sure we get all the arguments from  
16 Mr. Lazar and Ms. Goldsmith into the record, and then we  
17 will take this under advisement during the lunch break and  
18 get back to you.

19 But, Mr. Lazar, do you have other arguments to  
20 make?

21 MR. LAZAR: Just that Ms. Goldsmith is not an  
22 expert; and as an attorney, is trying to provide evidence  
23 to support her exhibits.

24 HEARING OFFICER DODUC: Okay. Anything else?

25 MR. LAZAR: And is also not a testifying witness.

1 HEARING OFFICER DODUC: All right. Then with  
2 that, we will take all of those arguments under  
3 advisement. We'll take a lunch break.

4 MS. GOLDSMITH: I do have something further to  
5 say about -- first of all, I did address the NMFS threat  
6 assessment where that came from. The CEMAR excerpt was  
7 authenticated by Mr. Dettman.

8 HEARING OFFICER DODUC: Yes.

9 MS. GOLDSMITH: And the passage plan whose sketch  
10 was also authenticated by Mr. Dettman as being a rough  
11 approximation of the layout of passage transect four when  
12 he was there.

13 HEARING OFFICER DODUC: Now, you've asked him a  
14 question and he answered based on your question. But  
15 let's go ahead.

16 And, Mr. Lazar, do you have something else to add  
17 beyond your standard objections, which are already in the  
18 record?

19 MR. LAZAR: I think I was about to say what you  
20 were about to say.

21 HEARING OFFICER DODUC: Okay. Good.

22 And with that, we will take a lunch break. We  
23 have lots to discuss. So let's resume at 12:45.

24 And, Mr. Lazar, will you have redirect?

25 MR. LAZAR: I will have redirect, yes.

1 (Whereupon a lunch recess was taken  
2 at 12:02 p.m.)

3 AFTERNOON SESSION

4 12:47 p.m.

5 HEARING OFFICER DODUC: Let's go ahead and  
6 resume.

7 Before we took our lunch break, we heard Ms.  
8 Goldsmith introduce into evidence exhibits numbered 44  
9 through 47. And we also heard into the record various  
10 objections, especially from Mr. Lazar.

11 After consulting with my co-hearing officer, we  
12 find that Ms. Goldsmith's exhibits have relevancy and  
13 foundation and therefore we are accepting them into the  
14 record.

15 (Whereupon Exhibits ESR 44, 45, 46, 47  
16 were admitted into evidence.)

17 HEARING OFFICER DODUC: With that, before we get  
18 to you for redirect, Mr. Lazar, I believe there's some  
19 questions -- oh, I'm sorry. Mr. Murphey actually has a  
20 clarification to provide with respect to exhibits.

21 STAFF GEOLOGIST MURPHEY: Yes. Since one of the  
22 ESR exhibits, number 44, the date actually extends beyond  
23 what our exhibit, SWRCB-5, which is incorporated by  
24 reference, we had from the date -- from 1950 to March 8th,  
25 2011. So we wanted to extend and modify our exhibit to

1 include it to extend to today's date, to July 8th. And  
2 also that goes for SWRCB-6, which is the lower gage, we'll  
3 extend it to the same date, July 8th, 2011.

4 HEARING OFFICER DODUC: Any objections to those?

5 MR. LAZAR: None.

6 HEARING OFFICER DODUC: Not hearing any, those  
7 evidence have been -- those exhibits have been expanded  
8 per Mr. Murphey's comments.

9 With that, I believe there is some questions for  
10 your witnesses, Mr. Lazar, before we begin your redirect.

11 Chair Hoppin.

12 BOARD MEMBER HOPPIN: Mr. Dettman, I have a  
13 couple of questions for you.

14 In your opening comments, you made a reference to  
15 a snorkel study that evaluated the impacts of overhanging  
16 riparian vegetation and the things that would be  
17 associated with riparian vegetation. In your opinion,  
18 does the diversion at El Sur Ranch impasse at least have  
19 any effect on riparian vegetation?

20 MR. DETTMAN: No, I don't think that it does,  
21 because the -- unless the root zone is desaturated, you  
22 wouldn't have any stress to the trees. In terms of the  
23 woody debris along the stream and overhanging vegetation.  
24 Unless there was some mortality of the trees that might be  
25 due to the pumping, I can't see that that would be a

1 problem.

2 BOARD MEMBER HOPPIN: I certainly didn't disagree  
3 with your analysis of the value. I just didn't understand  
4 how it related to what we were doing here today.

5 MR. DETTMAN: Well, there could be a situation  
6 where the trees themselves would be -- you know, I think  
7 this might come out of Fish and Game's work. In certain  
8 locations where the trees overhanging a riffle, and if you  
9 dewater that riffle, then the trees are no longer  
10 functioning as habitat for fish in combination with the  
11 flow that's there. So I think that might be a very  
12 localized impact though in this reach.

13 BOARD MEMBER HOPPIN: You talked about having  
14 actively participated in fish salvage on the Carmel River  
15 over the years. And I'm sure you get plenty of  
16 opportunities for that unfortunately. What do you do with  
17 those fish when you salvage them?

18 MR. DETTMAN: That program has evolved through  
19 the years. About the first half of the program we  
20 re-released the fish into the stream upstream of the  
21 drying reach. And then recognizing that, unlike the Big  
22 Sur River, we could have too many fish in the stream at  
23 one point and they actually could get growth depression  
24 because of too many fish, so all along and originally we  
25 had plans to build a facility to hold the fish during the

1 summertime. And that facility was under construction from  
2 about 1995 to 1997. It's been remodified to address water  
3 quality concerns, primarily temperature, because it's  
4 located below San Clemente Dam. We had a cooling tower in  
5 there to cool the water off that's pumped out of the  
6 alluvium.

7           And so right now, most of the fish are -- it's  
8 been half and half, depending upon where they're located,  
9 where they're rescued. If we rescue fish in the very  
10 lowest portion of the stream, those fish, many of them are  
11 taken down to the lagoon, because the impacts of water  
12 development basically interrupts their normal natural  
13 migration to the lagoon. And those fish are typically  
14 either quite large or quite small that time and location.

15           When we get up about river mile three, which is  
16 above the lower USGS gage, those fish are taken upstream  
17 to the facilities and raised there until the following  
18 fall or winter and then released back into the river.

19           BOARD MEMBER HOPPIN: When you have flows to get  
20 them out of the system.

21           MR. DETTMAN: Yeah.

22           BOARD MEMBER HOPPIN: You obviously spent a lot  
23 of time. And there was questions about the values you  
24 placed on having an open bar, if you will, at the lagoon.  
25 When the lagoon is closed, do you have the expertise and

1 opinion - and if you don't, don't hesitate to say so -  
2 what happens to that water when that bar is closed? Does  
3 it just percolate out through the sand bar or does it  
4 potentially have an impact on the river depth?

5 MR. DETTMAN: I am not really qualified to make  
6 that determination for the Big Sur River

7 BOARD MEMBER HOPPIN: Unfortunately, I'm not  
8 either so I needed to ask.

9 MR. DETTMAN: I would think there would be a  
10 combination of both. On the Carmel, what we see is once  
11 the flows drop below a level that keeps the mouth open,  
12 then that surface flow goes into filling the lagoon up.  
13 And so at least on the Carmel a fairly high fraction of  
14 that water that comes in below the 20 cfs threshold goes  
15 to filling the lagoon up. And then we've -- as I recall,  
16 we had some monitoring wells there as far upstream as at  
17 the river mile one, which would be the Highway 1 bridge.  
18 And you can see a response even that far back, when the  
19 lagoon fills, the groundwater tends to fill in around.

20 BOARD MEMBER HOPPIN: I guess it would have a lot  
21 to do with the underlying soil structure and the  
22 topographies and the amount of --

23 MR. DETTMAN: Yeah. And I would think that  
24 there's probably difference between the two systems.

25 BOARD MEMBER HOPPIN: And you also mentioned, I

1 believe, that it's not clear what effect wave and action  
2 has on breaching the bar. It came up in one of the first  
3 days of testimony, and I don't recall from whom, that at  
4 times wave action would actually breach it. So on any  
5 given year it's some kind of a situation. It could either  
6 be breached by a degree of flow or a combination of flow  
7 and wave action or by wave action alone; is that correct?

8 MR. DETTMAN: I think that's correct, yes.

9 BOARD MEMBER HOPPIN: And your concerns about  
10 having a closed bar in that situation are stratification,  
11 dissolved oxygen, CO<sub>2</sub> levels and stratification, is that  
12 correct?

13 MR. DETTMAN: Not so much that impact as the  
14 ability of fish to move freely from the ocean to fresh  
15 water. There's more of a concern related to the level of  
16 diversion influencing whether the lagoon is open and  
17 closed and for what duration. And that's the sort of  
18 thing that takes actually a fair amount of work to  
19 determine. If you can envision it, on the Carmel River it  
20 looks a lot like a logarithmic function, where at 5 cfs  
21 the lagoon is only open approximately 20 percent of the  
22 time; and as the flow goes up to 20 cfs, it's more like 70  
23 percent; and then to 30 or 40 cfs tends to remain open.  
24 And there are periods where that flow does close  
25 occasionally. But then it always fills up and breaches

1 again.

2 BOARD MEMBER HOPPIN: Could there be a point  
3 where a minimum flow, although a flow had a negative  
4 effect where it, you know, basically put any migrating  
5 smolts or kelts in more of a kill zone, if you will, where  
6 they saw a flow and they were trying to make it across the  
7 threshold but were more vulnerable to -- and predation?

8 MR. DETTMAN: I just -- I don't know. I don't  
9 think that's been well studied but it's possible.

10 BOARD MEMBER HOPPIN: Okay. Here's the \$64,000  
11 question. Why is the lagoon on the Big Sur River  
12 different than the -- other than the sheer size of it,  
13 than the lagoon on the Russian River, which we have set  
14 flow standards based on a desire by the fishery agents to  
15 keep that bar closed because they felt it was better?  
16 You're the expert. You tell me.

17 MR. DETTMAN: That's a tough one, because -- you  
18 know, I think that there's a thought that if a lagoon  
19 closes and it can stay in good condition, then it will  
20 rear large numbers of fish. So if you're interested in  
21 simply numbers of fish, that would probably be a good  
22 strategy to take.

23 On the other hand, if you're trying to maximize  
24 the variability and the returning life history types of  
25 the steelhead and they have -- as you know, they've

1 been -- you know, if they're born in one year, they can  
2 return to the stream -- actually there's some records of  
3 fish returning after a year and a half, or they can return  
4 for the first time after seven years. And so that mixture  
5 of different life history types I think is what sets the  
6 Big Sur River apart, particularly for this distinct  
7 population segment, where it's about the only one that  
8 does that now.

9 BOARD MEMBER HOPPIN: But could that preclude  
10 this variability of timing, if you will, or do the fish --  
11 I mean, it is a bit of a natural phenomenon other coastal  
12 streams that don't have a regular -- or, you know, where I  
13 live they open the bar at 3:30 in the afternoon. I don't  
14 think nature has quite that kind of a clock. So I mean  
15 there's a degree of genetic adaptability, I would assume.

16 MR. DETTMAN: You know, I think that the  
17 timing -- that the different life history phases and when  
18 fish enter fresh water and when they leave is I think  
19 genetically controlled to some degree. But there's also  
20 the opportunity. So --

21 BOARD MEMBER HOPPIN: And they're opportunistic  
22 certainly.

23 MR. DETTMAN: Yeah, they are. And then you see  
24 this in the early accounts of king salmon in the  
25 Sacramento Valley. If you go back to the very early

1 counts that were made basically from --

2 BOARD MEMBER HOPPIN: They stick close to the  
3 streams and sand bars and things.

4 MR. DETTMAN: But, anyway, the point is that if  
5 you give them an opportunity, they will take advantage of  
6 it.

7 BOARD MEMBER HOPPIN: Thank you very much.

8 HEARING OFFICER DODUC: Mr. Lindsay.

9 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
10 Mr. Dettman, I've got a few clarifying questions for you.  
11 I want to refer you to CSPA/CBD Exhibit 100, page 30, your  
12 Table 2 that has the recommended interim minimum bypass  
13 flow requirements. I just want to be 100 percent sure  
14 that I understand how this would be applied operationally  
15 if it was to show up in a permit.

16 So let's pretend it's March and -- let's say it's  
17 March 15th. So to get the bypass requirement for March  
18 15th, I would look into the record of daily median flow  
19 and find the old value for March 15th; is that correct --  
20 the historical value for March 15th?

21 MR. DETTMAN: That's correct, yes. You can do  
22 that on the realtime -- the realtime chart USGS has that  
23 plotted each day.

24 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
25 Okay. And you put on there that based on what you found,

1 well, somewhere between 102 and 147. So, let's say for --  
2 again, an example, on March 15th let's say pretend it's  
3 130 cfs. So on March 15th, diversions would be allowed as  
4 long as the instantaneous rate did not fall below 130 cfs;  
5 is that correct.

6 MR. DETTMAN: That's correct.

7 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
8 And moving on to July. In early July, we would apply the  
9 same methods, but once that the upper gage, the daily  
10 median, fell to 20 cfs, from there on out we would use 20  
11 cfs to the lower gage as the compliance value?

12 MR. DETTMAN: That's correct.

13 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
14 Okay. And looking at August, it says variable: 15 to 20  
15 cfs. But that's actually either 15 or 20 cfs depending on  
16 what's going on at the mouth of the river?

17 MR. DETTMAN: That's correct.

18 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
19 And another clarifying question. Going forward, was it  
20 your intent that these daily medians would change in the  
21 future as more history is collected or should we just  
22 stick with --

23 MR. DETTMAN: Yes. You know, rather than get in  
24 a long like working discussion of what the actual median  
25 is for that day, I would recommend relying on the USGS

1 because they determine that as a matter of where they're  
2 working and they publish that every day. And I believe  
3 it's for the last -- up through the last water year that  
4 they use. So when they've been updated once a year, then  
5 they will use those numbers.

6 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
7 And they would update the numbers then?

8 MR. DETTMAN: Yes.

9 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
10 One last question. You've selected the median flow as  
11 being protective of fish. Why is that?

12 MR. DETTMAN: It's my opinion that in these  
13 coastal streams the median flow provides enough  
14 opportunities for upstream migration and downstream  
15 migration on any given day. Because if you have a storm,  
16 there will be flows above that level. And because the  
17 diversion is a relatively small fraction of those winter  
18 flows, there'll be plenty of opportunities for the fish to  
19 get upstream and downstream. So that's the reason for  
20 selecting the median on a daily basis. We're giving you  
21 that built-in variability that the fish themselves have  
22 had to adapt to over time.

23 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
24 Okay, thank you. That's all I have.

25 BOARD MEMBER HOPPIN: I just have one question.

1 When you made your initial presentation, you talked about  
2 concerns about being able to calibrate new USGS gage. Can  
3 you tell me why you think it might be particularly  
4 difficult?

5 MR. SHUTES: Because you have a variable stream  
6 channel in that part of these rivers, it is always a  
7 question of whether calibration is going to work, and you  
8 don't really know until you try it. And it's just a  
9 to-be-sure kind of situation.

10 BOARD MEMBER HOPPIN: But that variation wouldn't  
11 be unique to this river or any other?

12 MR. SHUTES: No, No. It wouldn't. Let me take  
13 that back a little bit. It does seem, because this lower  
14 channel has been characterized by many people as being  
15 very dynamic, that it might be a little more of a concern  
16 than some other channels. It's not like a bedrock kind of  
17 situation as far as standards where you have clear,  
18 defined areas that are going to be relatively constant and  
19 where calibration is more certain.

20 BOARD MEMBER HOPPIN: Has USGS expressed concern  
21 about this or this conversation you've had with others?

22 MR. SHUTES: I don't know why it came to my  
23 attention. I believe that it's somewhere in the record  
24 here that someone raised the issue.

25 BOARD MEMBER HOPPIN: Thank you.

1 HEARING OFFICER DODUC: Other questions?

2 Mr. Murphey.

3 STAFF GEOLOGIST MURPHEY: Yes, following up on  
4 Chair Hoppins questions about the gage. I believe it was  
5 Mr. Dettman, you said that USGS gage data is now on-line.  
6 Even though the gage isn't calibrated, USGS must have some  
7 sort of confidence in those flows that are posted on-line.

8 MR. SHUTES: Are you asking me?

9 STAFF GEOLOGIST MURPHEY: Yeah, either of you  
10 two, whichever wants to answer it.

11 MR. SHUTES: All the gage data that's posted  
12 on-line is conditional data subject to review, and  
13 especially when you have a new gage. I think they review  
14 it ones a year. At that point, they would determine  
15 whether or not there had been a problem I think with  
16 calibration.

17 Well --

18 MR. DETTMAN: Can we answer this in tandem?

19 STAFF GEOLOGIST MURPHEY: Yes. Either of you.

20 MR. DETTMAN: I called USGS back in mid-May and  
21 talked to Mr. West there, who operates both of those  
22 gauges, because I was curious about when they were going  
23 to produce their first calibration rating curve. And he  
24 told me they were just about ready to do that. And then I  
25 questioned him about the apparent fluctuations in the gage

1 heights. If you've looked at that gage, you'll notice  
2 there's some fluctuations. He says they're having a  
3 not-unexpected problem for a period -- he expects it will  
4 be for a period of time, because of the runoff from the  
5 fire areas they're getting quite a large amount of  
6 sediment building up on the piezometers and that's  
7 interfering with the transmission -- or connection with  
8 the streams. So you're seeing a little more fluctuation  
9 than you would normally see. But they do have the first  
10 rating completed.

11 STAFF GEOLOGIST MURPHEY: Yes, I have a question  
12 about your Figure 8 where you have -- Larry, could you  
13 pull that up?

14 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
15 Do you know what page that is?

16 STAFF GEOLOGIST MURPHEY: It's actually the last  
17 one after this one that's on the screen.

18 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
19 Okay. Figure 8 in CBD-100?

20 STAFF GEOLOGIST MURPHEY: Yes.

21 There it is.

22 You base -- during the wet season you base the  
23 flows on the upper gage and then I believe it's for July  
24 18th it's all based on data from the lower gage. Now, why  
25 did you split that up or use two gauges and not just one?

1           MR. DETTMAN: I split it up because basically  
2 during the winter high flow period most of the time the  
3 diversion is a relatively minor component of the total  
4 flow, and I wanted to make it relatively easy to use. If  
5 we used the lower gage during the wintertime, we'd have  
6 this constant question about how accretion below the upper  
7 gage affects flow at the measuring point. And since we're  
8 using the median over a long-term record, we needed a  
9 long-term record to do that. So the upper gage for the  
10 wintertime just makes a lot more sense. It's been there  
11 for 60 years and it's located in a pretty stable reach.

12           And the lower one is set that way because if  
13 we're interested in this particular location and what the  
14 potential effects are of diversion in that location.

15           STAFF GEOLOGIST MURPHEY: So once the gage is  
16 calibrated, would you be comfortable using both high and  
17 low flows from the lower gage only or would you still  
18 want --

19           MR. DETTMAN: Well, that would be -- I suppose  
20 you could do that. I haven't given a lot of thought about  
21 it. But it would make it difficult because you'd be  
22 applying a median requirement from the upper gage to the  
23 lower location. I suppose that could be done.

24           I think that, you know, my vision of this would  
25 be that, because costs are a factor, money is a factor, it

1 would be better -- and USGS has this in many locations.  
2 They have what they call low season gauges -- or low flow  
3 season gauges where they only calibrate and track flows  
4 during the low flow period. And they have other gauges  
5 that they use for high flows.

6 STAFF GEOLOGIST MURPHEY: So the upper gage is  
7 used just because it has the longer historic record?

8 MR. DETTMAN: Yeah, basically.

9 STAFF GEOLOGIST MURPHEY: I had a question for  
10 Mr. Shutes.

11 At the end of your testimony, you have a series  
12 of recommendations. And one of them, Recommendation 1,  
13 you state that the "applicant should be required to pay  
14 for gauge installation, calibration, and maintenance."

15 I'm just curious. What would be the annual cost  
16 of that?

17 MR. SHUTES: You hear a wide range of cost  
18 estimates. I have heard an annual maintenance cost of  
19 about \$30,000. But I've also heard in specific cases  
20 parties who have been asked or who are in a situation  
21 where it's being contemplated their being asked to pay for  
22 this that it might be more. But to the best of my  
23 knowledge, having encountered the issue a number of times,  
24 about \$30,000 is probably a fair estimation.

25 STAFF GEOLOGIST MURPHEY: And now just assume

1 that USGS wouldn't have funding to maintain their gage.

2 MR. SHUTES: That's correct. For the last  
3 several years, usually in the spring, a document is  
4 circulated regarding budget issues in Congress to pay for  
5 USGS gages. And it's gone so far as to having a number of  
6 potential gauges listed for possible discontinuation.  
7 It's a real problem. It's not just a -- and I perceive it  
8 as being a long-term problem. It's not just a  
9 hypothetical problem.

10 STAFF GEOLOGIST MURPHEY: Also had a question  
11 about your number 11 on your recommendations. You say a  
12 long-term monitoring program of hydrology on the Big Sur  
13 River should be conducted. Now, how would that differ --  
14 well, what components of that would differ from the IFIM  
15 study that's currently ongoing?

16 MR. SHUTES: Well, the IFIM study would be, as I  
17 would think, a one-time kind of mapping of habitat and  
18 determination of velocity, depth, and possibly substrate  
19 and cover within the stream. What I had in mind was more  
20 making sure that the channel is not changing and thus  
21 possibly affecting the effects of the diversions. A  
22 population study of steelhead. I think there's been some  
23 question, in fact considerable question, raised about the  
24 condition of the fishery. And there's been quite a bit of  
25 discussion about the absence of data. We have a lot of

1 anecdotal data such as was provided by Mr. Cunningham this  
2 morning and others that were provided in exhibits  
3 submitted by the Carmel River Steelhead Association. But  
4 we don't have a population study in much of the river.  
5 And we don't have the kind of data that would provide  
6 clarity and agreement about what the meaning of that data  
7 is.

8           STAFF GEOLOGIST MURPHEY: Would the IFIM study  
9 take into account a lot of, you know, fish populations  
10 throughout, I guess it's going to be, a two-year period,  
11 maybe more than a two-year period, looking at different  
12 flow regimes throughout that two-year period?

13           MR. SHUTES: I don't know whether the curves that  
14 have been developed for the IFIM study that's being  
15 conducted are based on actually going out and looking at  
16 where -- what habitat is actually being used by fish in  
17 this river or it's based on something es. I suspect the  
18 former.

19           But in terms of -- this measure is habitat. It  
20 doesn't measure population. Those are two very different  
21 things. And also channel variability, it gives you a  
22 snapshot but it doesn't -- it shows what the channel  
23 transects are right now. But as that changes over time,  
24 particularly with high flow events, that would not -- that  
25 would be different. So this wouldn't capture future

1 events.

2 STAFF GEOLOGIST MURPHEY: Okay, thanks. That's  
3 all I have.

4 HEARING OFFICER DODUC: Ms. Mahaney.

5 SENIOR STAFF COUNSEL MAHANEY: Mr. Dettman, I  
6 just have one question following up on your slide that was  
7 entitled "Critical riffles." And if I heard you  
8 correctly, I believe that you said that the .7 depth was  
9 not met at 146 cfs that you had estimated; is that  
10 correct?

11 MR. DETTMAN: That's correct.

12 SENIOR STAFF COUNSEL MAHANEY: Now, from reading  
13 the various proposals for interim flow recommendations,  
14 one, for example, that Fish and Game made, as you noted in  
15 your testimony in the -- that they made in the EIR  
16 comments, was 132 during that same period. Can you  
17 explain to me, if what seems to be irreconcilable, at  
18 least to me, conclusion that 132 is fine but your  
19 observations show that 146 --

20 MR. DETTMAN: -- it doesn't meet the criteria.

21 SENIOR STAFF COUNSEL MAHANEY: Yeah.

22 MR. DETTMAN: I think that's a special location  
23 because it is associated with the bank erosion and the  
24 channel change. And I mean it's likely that we could come  
25 back tomorrow and we would need more or less at that

1 location. So it is a bit of a moving -- called a moving  
2 target in terms of the actual flow recommendation based on  
3 that.

4           Keep in mind that when Fish and Game recommended  
5 132, that was assuming that there would be storms during  
6 that period. So although the median flow for that month  
7 was 132, it's often well above that and often -- half the  
8 time below that.

9           So there are going to be periods during those  
10 months when the fish based on the criteria -- you could  
11 say, well, they can't migrate. But in fact they do. And  
12 it's not something that you want to encourage them to do;  
13 in other words, you don't want them migrating up the  
14 stream constantly on their sides beating their way up each  
15 riffle as they approach.

16           So I think it behooves certain people to make  
17 recommendations. And you as a board have got to make that  
18 decision where do we set that level. And the information  
19 that -- if it were just based on that riffle, you would  
20 say 142. Well, I know that when I'm making  
21 recommendations based on the medians for those various  
22 months, there will be times when it's above and there will  
23 be times when it's below that.

24           I think the important thing here is that when the  
25 flow is at that level, the diversion is probably

1 compatible with that situation, because it represents a  
2 relatively, you know, very small portion of the total flow  
3 at that time.

4 I hope that answers your question.

5 SENIOR STAFF COUNSEL MAHANEY: Yes, it does.  
6 Thank you.

7 HEARING OFFICER DODUC: Any other questions?

8 With that, Mr. Lazar, you may have 20 minutes for  
9 your redirect of your witnesses.

10 REDIRECT EXAMINATION

11 BY MR. LAZAR:

12 Q Mr. Dettman, I'm just going to have some quick  
13 questions for you here regarding -- could you stop the  
14 clock? I need to retrieve a document.

15 Sorry for the delay.

16 Mr. Dettman, during cross-examination, you were  
17 asked some questions by Ms. Goldsmith regarding the  
18 overall habitat of the Big Sur River versus different  
19 rivers. You were asked specifically about the exhibit  
20 that was just submitted as ESR-45.

21 Can we bring that up for a moment?

22 Thank you.

23 Now, Ms. Goldsmith identified the Big Sur River  
24 here as having all these different green bars here. Your  
25 interpretation of this, even though it's green, is that

1 like a green light there? Does that mean go for it? Is  
2 that how I interpret that?

3 A Well, my interpretation would be that those are sort  
4 of minor problems, so they're green --

5 Q So there's still problems?

6 A -- my understanding.

7 Q It's your understanding.

8 So the color coding doesn't refer to green  
9 light/red light; it refers to degree of problem?

10 A Degree of problem, yes.

11 Q I see.

12 And the fact that it says Big Sur River, does  
13 that refer to the whole river or to the study area that's  
14 in question in this hearing?

15 A Well, that's a good question. I'd have to look at the  
16 recovery plan to be sure. It could be either. The status  
17 of steelhead populations in streams where there's  
18 unknowns, a low permanent barrier, is different.  
19 Actually, upstream of permanent barriers the fish are more  
20 recognized as, I'll call them, rainbow steelhead. I  
21 refuse to use the word "trout." But downstream of those  
22 points this is probably what they're referring to. So  
23 it's the lower eight miles, I assume.

24 Q The lower eight miles. But the study area is just one  
25 of those miles?

1 A Yes.

2 Q So --

3 A Twelve percent, approximately.

4 Q Twelve percent.

5 So could the overall status of those eight miles  
6 be different from what is in that one 12 percent?

7 A Certainly could. I would think that they would  
8 highlight that if they knew about it though.

9 Q Now, Ms. Goldsmith emphasized that the amount of water  
10 that had been historically pumped is not as much as what  
11 they're requesting. Do you recall Ms. Goldsmith saying  
12 that?

13 A I do, yes.

14 Q So would your impression be then that the relative  
15 health that's on this chart here is a reflection -- excuse  
16 me. Let me ask again.

17 Do these then green lights here reflect the  
18 proposed diversion, the amount of diversion that's been  
19 proposed?

20 A No. The green lights in this case -- or the green  
21 bars refer to specific threat sources. The fact that --

22 MS. GOLDSMITH: Objection.

23 HEARING OFFICER DODUC: Hold on a second, Mr.  
24 Lazar.

25 Mr. Berliner.

1 MR. BERLINER: I'm going to object to this line  
2 of questioning, because the witness has already indicated  
3 he doesn't know what NMFS is intending by these bars. And  
4 now he's being asked to interpret the bars that he says he  
5 doesn't know what NMFS -- how NMFS was -- what they meant  
6 when they put these up. I don't understand how he can  
7 answer when he says he doesn't know.

8 HEARING OFFICER DODUC: Mr. Lazar.

9 MR. LAZAR: I believe Mr. Dettman said a minute  
10 ago that he identified the green lights as minor problems  
11 versus the red lights as major problems.

12 HEARING OFFICER DODUC: So that's his opinion  
13 he's providing, not guessing at what NMFS is suggesting.

14 MR. LAZAR: Right.

15 MS. GOLDSMITH: I also have objections that's  
16 related to that. And that is that this lacks foundation.  
17 We don't know whether Mr. Dettman has any idea what NMFS  
18 meant when they put these colors there.

19 HEARING OFFICER DODUC: Thank you.

20 I'm going to overrule the objections.

21 You may answer the question.

22 MR. DETTMAN: Would you repeat the question?

23 BY MR. LAZAR:

24 Q Thank you, Mr. Dettman.

25 My question was whether or not these different

1 colors here would be different or whether or not the  
2 threats or -- allow me to rephrase -- whether or not the  
3 proposed diversions and requirements in the latest version  
4 of the applicant's application are reflected by these  
5 different color codes on the Big Sur River here.

6 A I don't know, because I don't know whether NMFS  
7 considered this specific diversion as a potential threat.

8 Q I see. So you don't know if NMFS considered the  
9 applicant's proposed diversions?

10 A Right.

11 Q I see. And so in order for NMFS to consider the  
12 applicant's proposed diversions, wouldn't it be reasonable  
13 to assume that NMFS would have to have the proposed -- the  
14 latest proposed diversions in hand?

15 A I would think so. Although they could look at the  
16 historical diversions.

17 Q I see. So is your impression of this chart that they  
18 looked at historical diversions?

19 A Specifically I --

20 MS. GOLDSMITH: It calls for -- objection. It  
21 lacks foundation.

22 HEARING OFFICER DODUC: Go ahead and answer.

23 MR. DETTMAN: I don't know whether they  
24 specifically looked at the historical diversions at El Sur  
25 or the new proposed diversions and formulated this chart.

1 BY MR. LAZAR:

2 Q Thank you.

3 And when Ms. Goldsmith was asking you about the  
4 other rivers appearing to be in relatively worse health  
5 than the Big Sur River, does that sort of comparison imply  
6 that the Big Sur River is in good health?

7 A Well, no, because all of the rivers within this  
8 distinct population segment are at the threatened level.  
9 I don't know of any populations in this area that are what  
10 I would call robust and healthy.

11 Q And Ms. Goldsmith identified a greater magnitude of  
12 diversion in the other streams. Do you recall hearing  
13 that?

14 A I do, yes.

15 Q Because there's a different magnitude of diversions,  
16 does that mean that the threat in the Big Sur River is  
17 somehow less real or less problematic?

18 A No, because I think it would depend upon -- making  
19 that determination would depend upon magnitude measured  
20 how and where. And I don't know that for these other  
21 streams and how -- I know about it but I don't know how  
22 NMFS determined it.

23 Q Thank you.

24 I'd like to take a look at our Table 6 that was  
25 pointed out by Ms. Goldsmith in our testimony.

1 A That's Table 6 on 100?

2 Q No. I believe it was -- I'm sorry. Figure 6 of our  
3 testimony. So that would be CSPA/CBD-100, Figure 6.

4 Thank you.

5 Now, you were asked a number of times whether  
6 this represents a speculation or not. Can you explain the  
7 significance of these tables for us, please?

8 A Yes. This is a description of the timing and relative  
9 magnitude of diversions based upon an assumption that El  
10 Sur's pumps would be running at 5.84, comparing the actual  
11 flows that were available on each of the days depicted in  
12 these charts. And this is a daily analysis. There was  
13 discussion about, well, why would you need 900 pages of  
14 flow data? And this what was used to generate these  
15 figures. So it's a depiction of the timing as well as the  
16 relative magnitude of diversions compared to the river  
17 flow.

18 Q Thank you.

19 Now, you also heard from Ms. Goldsmith that Dr.  
20 Hanson's studies, according to Ms. Goldsmith, included  
21 that the habitat in the river remained viable. And she  
22 used the term "viable." Is viable the same thing as  
23 healthy?

24 A Well, in the case of fish populations, I think there  
25 would really be a general correspondence between the two.

1 So I would say, yeah, it would be roughly equivalent.

2 MR. LAZAR: I see. And can we take another look  
3 at page 30 of CSPA/CBD-100, please?

4 I think you're on it now.

5 There we go.

6 --o0o--

7 BY MR. LAZAR:

8 Q Now I wanted to get a little bit of clarification  
9 here. Ms. Goldsmith said that your requested diversion  
10 was between 10 and 15 cfs.

11 A You mean the bypass requirements?

12 Q Yes. Can you point out on there where the proposed  
13 diversions are between -- or bypass flows are between 10  
14 and 15 cfs?

15 A No, because they're not on that chart. The 10 to 15  
16 cfs is my judgment about how much flow is necessary to  
17 keep the river mouth open. The requirements in this chart  
18 for the summertime period are based on that, plus a  
19 consideration of what's needed in the stream itself to  
20 keep it, quote, healthy and viable. So that's the reason  
21 that it's somewhat greater than the 10 to 15 that she  
22 referred to.

23 Q I see. And the 10 to 15, is that measured from the  
24 lower gage or from the upper gage?

25 A In the summertime, all of these bypass flow

1 requirements would be made at the lower gage or a nearby  
2 location.

3 Q So that then would be, for example, in August, as I'm  
4 reading --

5 A For an example, in August it's instantaneous daily  
6 flows 15 to 20 cfs. And where the X is on the far  
7 right-hand column measured at the Andrew Molera gage.

8 Q Which is the lower gage?

9 A Which is the lower gage.

10 Q And then in one of the charts -- one of the lines,  
11 which is July, you have X's on both gauges. Why is that?

12 A Well, because that's the month that you're actually  
13 using both gauges.

14 Q On July 19th?

15 A Yes, through July 19th.

16 Q So you're saying in July then you would use one gage  
17 until July 19th, then the other gage after that?

18 A Yes.

19 Q Okay. Now in 2000 --

20 HEARING OFFICER DODUC: Hold on, Mr. Lazar.

21 Ms. Goldsmith.

22 MS. GOLDSMITH: I'm going to object to that  
23 entire line of questioning. I did not ask Mr. Dettman  
24 about his recommendations other than his recommendations  
25 and conclusions related to the opening and flows needed

1 for the lagoon. So I move to strike all of this  
2 discussion.

3 HEARING OFFICER DODUC: Mr. Lazar.

4 MR. LAZAR: Ms. Goldsmith asked -- or made the  
5 statement both that he asked for 10 to 15 cfs as his flow  
6 requirements and also that they would be measured from the  
7 upper gage. When I objected to her characterization, she  
8 objected to my characterization of her characterization.  
9 So I'm responding to that.

10 HEARING OFFICER DODUC: That's fine. Your  
11 objection is overruled.

12 Please continue, Mr. Lazar.

13 MS. GOLDSMITH: Your Honor, may I respond?

14 HEARING OFFICER DODUC: No.

15 Mr. Lazar, please continue.

16 MR. LAZAR: Thank you.

17 BY MR. LAZAR:

18 Q At another point you reviewed your testimony and Ms.  
19 Goldsmith pointed out that the lagoon was open all of the  
20 photos -- or all of the years that you examined except for  
21 October 2004. Do you recall her asking you that?

22 A Yes, I do.

23 Q Now, you also pointed out during your direct testimony  
24 of a summary that 2004 was not a critically dry year?

25 A That's correct. Depending on what system you use,

1 you'd either classify it as dry or below normal or in that  
2 range.

3 Q And yet you did find that the lagoon had closed in  
4 2004?

5 A That's correct.

6 Q So then in a year where it is critically dry, could  
7 there be an even stronger or could there be a greater  
8 likelihood that the lagoon would close?

9 A Yes, there would be a greater likelihood. I mean we  
10 can't describe the function because we don't have the data  
11 that's necessary to construct it. But in general, lower  
12 flows are going to increase the risk that the lagoon  
13 closes off, all other factors being the same.

14 Q Thank you.

15 Do you have any idea who took the photo of you  
16 when you were down there?

17 A No idea about the photo.

18 Q Regarding Exhibit 103, CSPA/CBD-103, Ms. Goldsmith  
19 pointed out that you had some information, some charts  
20 that you based your conclusions on, but that those charts  
21 were not part of the exhibit that you had submitted as  
22 testimony. Do you recall that?

23 A I do recall that. And I apologize for that. I  
24 actually had prepared a draft exhibit, but somehow I  
25 didn't get it in the mix.

1 Q Do you have that with you today?

2 A It's on my computer. I think that your associate put  
3 it on a thumb drive. So we could look at the information.

4 HEARING OFFICER DODUC: Ms. Goldsmith.

5 MS. GOLDSMITH: Yes, I believe that this would be  
6 proper rebuttal testimony but not redirect.

7 MR. LAZAR: It's a redirect to specifically what  
8 she was crossing on, which is why we we're submitting it  
9 now.

10 MS. GOLDSMITH: I was crossing on the  
11 testimony -- the direct testimony that was submitted, not  
12 testimony that wasn't submitted.

13 HEARING OFFICER DODUC: Thank you.

14 I'll go ahead and allow it now.

15 MR. LAZAR: Thank you.

16 MS. GOLDSMITH: If it's going to be allowed, I  
17 would request a copy of it contemporaneously right now.

18 HEARING OFFICER DODUC: That would be preferred,  
19 Mr. Lazar.

20 MR. LAZAR: So Mr. Dettman has it. Mr. Lindsay  
21 now has it. I am sitting here. I can facilitate this  
22 however you'd like. When I'm done with the redirect, I  
23 can forward it to Ms. Goldsmith.

24 HEARING OFFICER DODUC: You do not have copies  
25 for everyone?

1 MR. LAZAR: I did not have an opportunity to make  
2 copies of this yet as an exhibit. However, when I do  
3 submit it as an exhibit either now or on rebuttal, I could  
4 make copies.

5 MS. GOLDSMITH: Madam Chair, I would suggest that  
6 this is another reason that any testimony relating to  
7 measurements be submitted on rebuttal, before which Mr.  
8 Lazar will have an opportunity to submit the data for the  
9 parties to look at.

10 HEARING OFFICER DODUC: I would agree.

11 Let's save this for rebuttal. And you will have  
12 copies available for everyone, Mr. Lazar.

13 MR. LAZAR: Okay.

14 BY MR. LAZAR:

15 Q And then last but not least, I'd like to go back to a  
16 few comments that Ms. Goldsmith made. I'm going to need  
17 just a second to find that.

18 Ms. Goldsmith -- no, I think I've concluded my  
19 redirect. Thank you.

20 HEARING OFFICER DODUC: Thank you, Mr. Lazar.  
21 Department of Fish and Game, do you have any  
22 recross?

23 You have ten minutes for your recross

24 MS. FERRARI: Thank you.

25 Chandra Ferrari, Fish and Game.

1 I'm wondering if we could put back up everyone's  
2 favorite chart, ESR 45, the threat list.

3 RECROSS-EXAMINATION

4 BV MS. FERRARI:

5 Q I take it, Mr. Dettman, you're familiar with this  
6 chart now?

7 A I am.

8 Q I'm just wondering, in your opinion, because a  
9 category is not colored, does it mean that any activity in  
10 that category could not cause an impact to steelhead? For  
11 instance, surface water diversions is not colored in. So  
12 could we assume that any diversion that might occur on the  
13 Big Sur River could not possibly harm steelhead?

14 A Well, in the opinion of NOAA Fisheries, I would think,  
15 yeah.

16 Q What's your opinion?

17 A My opinion is that they probably didn't look at the  
18 entire reach of the river when they made these charts. I  
19 don't know that for a fact, but that's what I would think,  
20 because I can't envision them looking at the same  
21 situation that I did and concluding that there's no  
22 problem.

23 Q There's some evidence that's been submitted both by El  
24 Sur Ranch and the Department actually - I believe I also  
25 asked for it - shows that there may be some issues with

1 water quality as a result of septic tanks that might be  
2 located up near the park facilities?

3 A Yes, I'm aware of that. Although in reviewing the  
4 actual data that's available, the Central Regional Water  
5 Quality Control Board has been doing detailed measurements  
6 of water quality in the Big Sur River for about -- I think  
7 about eight years now, and I looked at that information.  
8 I didn't see any obvious indicators that there was enough  
9 organic matter or leakage of septic tank effluent into the  
10 stream to cause chemical imbalances, for example, in the  
11 water.

12 HEARING OFFICER DODUC: Ms. Ferrari?

13 MS. FERRARI: Yes.

14 HEARING OFFICER DODUC: Would you mind connecting  
15 for me your question with the redirect.

16 MS. FERRARI: Yes, I -- I was waiting for him to  
17 finish.

18 HEARING OFFICER DODUC: Okay.

19 BY MS. FERRARI:

20 Q My question was that -- there is no threat category up  
21 there for any sort of pollution. So if there was  
22 pollution occurring on the Big Sur River and there's  
23 evidence in the record that there is - and you may have a  
24 different opinion on that - but would that mean because we  
25 don't see a category for it or a colored category for it

1 that it couldn't have an impact to steelhead?

2 A Yeah, there could be an impact.

3 Q Okay. So maybe this threat -- colored threat list is  
4 not comprehensive?

5 A It may not be, although it's a pretty good list.

6 Q Okay.

7 A I do see -- you know, a follow-up. I do see  
8 recreational facilities listed there, which in my mind  
9 would probably be state parks, for example.

10 Q That could be.

11 A Yeah. And I see, you know, a light green color  
12 associated with that.

13 MS. FERRARI: Okay. Let's, if we can -- I  
14 believe Fish and Game gave an exhibit to Mr. Murphey, that  
15 was ESR's 34 but it was in color. Can we pull that up?

16 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
17 This is ESR 34, but it's not in color.

18 MR. TAKEI: If you open up our Fish and Game's  
19 July 8th folder, Mr. Lindsay.

20 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
21 Okay.

22 MS. FERRARI: Essentially what I want to do is  
23 just look at a couple of excerpts from this document.

24 MR. TAKEI: It's on the left-hand side.

25 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:

1 Which slide is this?

2 MR. TAKEI: Right there, ESR 34.

3 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:

4 Thank you.

5 BY MS. FERRARI:

6 Q So if we could quickly go down to page 5, you'll note  
7 that this -- sorry. We attempted to highlight some  
8 language in here, but it isn't there.

9 It's in the first paragraph though. Essentially  
10 what it says there is the -- the point of this exercise  
11 here was to assess the magnitude and the extent of  
12 threats. So I'd like to highlight the magnitude and  
13 extent portion of that.

14 And then if you look further through the report,  
15 you notice that they analyze watersheds along the Big Sur  
16 coast, seven different watersheds together, the Big Sur  
17 Coast BPG, they call it. If you look at PDF page 15,  
18 there's a statement there that says that the overall  
19 health of these watersheds is directly related to human  
20 population density.

21 And then if you look on PDF Page 33, you'll note  
22 that this Big Sur Coast BPG has the lowest human  
23 population.

24 And then you'll notice on PDF page 36 that they  
25 specifically state that the low threats identified reflect

1 the low human population density and low land use impacts  
2 in the area.

3           And I'm just wondering if -- actually you can  
4 look a little bit further down. One of the other  
5 watersheds that was included is the watershed in San Jose  
6 creek, the only watershed among these seven I believe that  
7 wasn't given a good rating, specifically because of  
8 surface water diversions and groundwater extraction in the  
9 main stem. So they have more essentially human  
10 interaction, more land use impacts it appears.

11           So does this suggest to you that possibly the  
12 reason that water diversions may not be listed as a threat  
13 in the Big Sur River may not be because the diversions  
14 that do exist don't impact steelhead at all but perhaps  
15 because there are so few of them, they're so limited,  
16 there's a limited population --

17           HEARING OFFICER DODUC: Just a moment, Ms.  
18 Ferrari.

19           Ms. Goldsmith, I assume you're about to make an  
20 objection.

21           MS. GOLDSMITH: I am about to make an objection.

22           This calls for total speculation of the witness.  
23 And it has to do with why NMFS put things in or didn't put  
24 things in.

25           MS. FERRARI: Well, I'd like to ask his opinion

1 then.

2 MS. GOLDSMITH: And I'd like some foundation --

3 HEARING OFFICER DODUC: Hold on, hold on.

4 Ms. Ferrari, what were you about to say in  
5 response to the objection?

6 MS. FERRARI: In response to the objection. I'm  
7 not asking his opinion on what NMFS is doing. I'm asking  
8 his opinion, if something makes sense to him, that more  
9 diversion on a watershed such as the one from El Sur Ranch  
10 would produce more threats to steelhead.

11 HEARING OFFICER DODUC: And, Ms. Ferrari, link  
12 that again, the question for me, link that to Mr. Lazar's  
13 redirect of this witness.

14 MS. FERRARI: Mr. Lazar, put back up the chart  
15 for the threats. And what I'm specifically asking him is  
16 if --

17 HEARING OFFICER DODUC: You're asking him about  
18 threats that are not on the chart.

19 MS. FERRARI: Right. The significance of that,  
20 though, I think it's been insinuated that it's not  
21 highlighted and therefore it has no significance as a  
22 threat on this watershed, and I don't believe that's  
23 correct. I want to know if that's the opinion of this  
24 witness.

25 MS. GOLDSMITH: And --

1 HEARING OFFICER DODUC: Ms. Goldsmith.

2 MS. GOLDSMITH: -- I have a further objection  
3 then that there's a lack of foundation that this witness  
4 knows what the specific criteria were for NMFS putting or  
5 categorizing as they did.

6 HEARING OFFICER DODUC: We've heard this  
7 objection before. And I think we've heard that he is not  
8 being asked to guess at what NMFS did or did not do, but  
9 he's being asked for his opinion.

10 MS. GOLDSMITH: About what?

11 HEARING OFFICER DODUC: About the chart and about  
12 threats that are on that chart.

13 Ms. Ferrari, I will let you continue, but you're  
14 on pretty thin ice here. So let's wrap this up and move  
15 on.

16 MS. FERRARI: I'll rephrase then.

17 BY MS. FERRARI:

18 Q In your opinion then, is it possible that more water  
19 diversion on Big Sur River would be more of an impact to  
20 steelhead?

21 A Yes. And in fact I do have a lot of experience with  
22 San Jose Creek. I worked on that ranch - it's called a  
23 fish ranch - for three years and I'm familiar with the  
24 water diversions and extractions on that system.

25 The levels of absolute diversions are less, but

1 the size of the San Jose Creek is smaller too. If they --  
2 if that stream has a problem, then I would think that the  
3 Big Sur should be rated as having a similar problem. So I  
4 would say that the level of diversions may be very similar  
5 in both those systems. San Jose Creek, for the 30 or 40  
6 years I've been observing it, rarely has a lagoon, rarely  
7 has outflow. There's a big beach in there that intercepts  
8 the flow. It should have a good lagoon in the summertime.  
9 But in fact it does not because of the diversions that  
10 have been occurring at least 50 years that I'm aware of

11 MS. FERRARI: Thank you.

12 That's it. Thank you.

13 HEARING OFFICER DODUC: Thank you.

14 Mr. LeNeve, any recross?

15 MR. LE NEVE: It's an objection, so I'm not sure.  
16 But if I'm wrong, I'm sure I will be told.

17 I have two questions.

18 RECROSS-EXAMINATION

19 BY MR. LE NEVE:

20 Q Mr. Dettman, in Ms. Goldsmith's cross of you or her  
21 redirect to you, she mentioned the ocean conditions being  
22 varied in the last 20 years.

23 A That's correct.

24 Q Have ocean conditions varied in the last hundred  
25 years, the last thousand years, the last million years?

1 HEARING OFFICER DODUC: I'm sure Ms. Goldsmith is  
2 going to object to this.

3 I don't believe Mr. Lazar redirected on this  
4 topic.

5 But Ms. Goldsmith.

6 MS. GOLDSMITH: I agree, that it exceeds the  
7 scope of the redirect. It also calls for speculation  
8 unless Mr. Dettman can claim that he was alive 100 years  
9 ago.

10 HEARING OFFICER DODUC: Ms. Goldsmith, it's good  
11 enough for me that it was not part of Mr. Lazar's  
12 redirect.

13 MR. LE NEVE: My other question may be, because  
14 both my questions were based on questions Ms. Goldsmith  
15 asked.

16 HEARING OFFICER DODUC: Your redirect needs to be  
17 based on what Mr. Lazar asked on redirect.

18 MR. LE NEVE: If that's the situation, then I  
19 have no questions.

20 HEARING OFFICER DODUC: Thank you, Mr. LeNeve.  
21 Ms. Goldsmith, did you sit down already?  
22 Your re-cross.

23 THE WITNESS: Ms. Goldsmith, before you start, am  
24 I allowed to take an emergency bathroom break?

25 HEARING OFFICER DODUC: Most certainly.



1 brought up by Fish and Game.

2 HEARING OFFICER DODUC: Your question needs to be  
3 based on Mr. Lazar's redirect, Ms. Goldsmith.

4 So please move on.

5 MS. GOLDSMITH: My question has to do with that.  
6 And it looks like he's still considering whether he's  
7 going to allow me to ask --

8 HEARING OFFICER DODUC: No, I'm actually not  
9 allowing you to ask the question.

10 MS. GOLDSMITH: Thank you very much.

11 HEARING OFFICER DODUC: Though it was a nice try,  
12 Ms. Goldsmith.

13 And that completes I believe the recross of these  
14 witnesses.

15 Mr. Lazar, at this point would you like to move  
16 your exhibits into evidence?

17 MR. LAZAR: Yes, I would.

18 HEARING OFFICER DODUC: I'm sorry. Before you  
19 do, are there any other questions from my -- no.

20 Okay. Please go ahead, Mr. Lazar.

21 MR. LAZAR: Thank you. And I would like to  
22 introduce CSPA/CBD-100 through 105, I believe; and CSPA 1,  
23 2, 3, and 4.

24 HEARING OFFICER DODUC: Any objections?

25 Not hearing any, we'll move those into the

1 record.

2 (Whereupon CSPA/CBS Exhibits 1-4 and 100-105  
3 were admitted into evidence.)

4 MR. LAZAR: Thank you.

5 HEARING OFFICER DODUC: Thank you, Mr. Lazar.  
6 Mr. LeNeve, your case in chief, please.

7 MR. LAZAR: Member Doduc, I'm going to be  
8 questioning Mr. LeNeve. Please give me a minute to  
9 prepare.

10 HEARING OFFICER DODUC: Okay.

11

12 DIRECT EXAMINATION

13 MR. LE NEVE: Thank you. My name is Brian  
14 LeNeve. I'm here today of President of and representing  
15 the Carmel River Steelhead Association. I'm also here to  
16 speak for and about the fish.

17 Carmel River Steelhead Association, also known as  
18 CRSA, is a small nonprofit group whose primary mission is  
19 protecting the Carmel River strain of steelhead and its  
20 habitat.

21 Back in 1974, a group of men noticed runs on the  
22 Carmel River were disappearing and decided to form an  
23 association to try to prevent those fish from becoming  
24 extinct. We believe the work CRSA has done is one of the  
25 main reasons there are still fish in the Carmel today.

1           CRSA has done habitat improvements, built a fish  
2 ladder and trap for Los Padres Dam, captured and reared  
3 young of the year steelhead in various off river sites  
4 location, returning the smolts the following year,  
5 operated a captive brood stock when the river did not run  
6 for four years, removed passage obstacles in tributaries,  
7 and provided supplemental water to the Carmel River  
8 Lagoon. Currently, our main efforts of CRSA is rescuing  
9 fish in the main stream and most tributaries as they dry  
10 up, including relocating the fish to areas that have  
11 water.

12           While the mission of CRSA is to protect the  
13 Carmel River fish, the Big Sur River is very important to  
14 CRSA. The runs of adult steelhead in the Carmel River  
15 have been reduced from an estimated size of 10,000 to an  
16 average of 400. There are so few fish in the Carmel and  
17 the fishing flow requirements are so high before one can  
18 fish, that members and the rest of Monterey County must  
19 rely to a great extent on the Big Sur River to go fishing  
20 or go north to Mendocino and Humboldt Counties.

21           MR. LAZAR: Mr. LeNeve, can you tell us --

22           HEARING OFFICER DODUC: Hold on. I thought he  
23 was providing his opening statement.

24           MR. LAZAR: I apologize. Please continue.

25           MR. LE NEVE: I'm doing an opening statement.

1           Unfortunately, our members the Big Sur River  
2 heading down the same disastrous path as the Carmel River.  
3 Steelhead numbers in the Big Sur have plummeted over the  
4 years, and more and more water is being taken or being  
5 requested from the river. To look at it in a very selfish  
6 way, CRSA does not have the resources to start rescues on  
7 another river.

8           I understand the Water Board gives more weight to  
9 experts, and that is appropriate. But non-experts can and  
10 do add value and information. Dr. Titus in his  
11 cross-examination stated it was fisherman who would know  
12 best what has happened to the fish numbers. As a  
13 fisherman, the president of Steelhead Association, and a  
14 native of Big Sur, and knowing a great many of the other  
15 fisherman, I'm in a position of being that expert. It is  
16 that on-site history that makes the testimony valuable.

17           In our testimony today, we will concentrate on  
18 what's happened to the fish over the last 50 years in  
19 regards to fish numbers and habitat on the Big Sur. We  
20 will provide letters or interviews representing 815 years  
21 of experience camping, hiking, living in the Big Sur and  
22 593 years experience fishing on the Big Sur. Those  
23 letters will note the precipitous drop in fish numbers and  
24 provide documented proof that steelhead occupy the Big Sur  
25 during all months of the year, requiring flows at all

1 times of the year. Not only will we provide evidence of  
2 steelhead in the river at all months, we will provide  
3 evidence of silver salmon living in the Big Sur.

4 We combined the information we gathered into two  
5 charts that will show how adversely affected the Big Sur  
6 river is.

7 This testimony is important because in the first  
8 two days of hearing and up to today, the health of the  
9 steelhead population and numbers of fish were discussed  
10 many times along with discussions as to when fish are in  
11 the river. There was no definitive answer to any of these  
12 questions. These questions must be answered in order to  
13 make informed and correct decision.

14 CRSA does not necessarily object to the permit  
15 for the El Sur Ranch, but that permit must not be at the  
16 cost of one endangered species or one threatened species.

17 HEARING OFFICER DODUC: Now you may begin Mr.  
18 Lazar.

19 MR. LAZAR: Thank you.

20 BY MR. LAZAR:

21 Q Just to clarify, is it LeNeve or LeNev?

22 A LeNeve.

23 Q Thank you. Would you once again give your name for  
24 the record?

25 A My name is Brian LeNeve.

1 Q And can you also give your place of address?

2 A I live in Carmel, California. My physical address is  
3 the third house southeast of 13th on Camino Real. My  
4 mailing address is PO Box 1012, Carmel, California, 93921.

5 Q Now is the written testimony you submitted true and  
6 accurate?

7 A Basically, my testimony -- as I stated, I caught my  
8 first steelhead at the age of eight. My mother, who was  
9 still alive, believes it was nine. So that would change  
10 the nine to 1951 or 52. Other than that, I believe it's  
11 true and accurate.

12 Q And could you state your qualifications, please?

13 A I stated a little bit in the past, but basically I was  
14 born on the Big Sur. I spent my first childhood years on  
15 the Big Sur River. I spend summers camping and hiking and  
16 fishing on the Big Sur. I fished the Big Sur for over 40  
17 years.

18 I still frequent the Big Sur several times a year  
19 to see what it looks like. And I know at one time a lot  
20 of the fishermen on the Big Sur and still know quite a few  
21 today.

22 Q Now --

23 A Also, I have a Bachelor's degree in business  
24 administration from Chico State College, and it's now  
25 California State University Chico.

1 I have represented the CRSA and cease and desist  
2 orders at this room here. And I'm actually part of CRSA  
3 trying to mitigate that order. I'm currently primary  
4 member of CRSA trying to resolve the illegal breach in the  
5 Carmel River Lagoon. And I represent CRSA in negotiating  
6 with the Monterey Peninsula Water Management District in  
7 Cal and set full requirements under Carmel River aquifer  
8 storage and recovery system, too.

9 Q And do you also have experience other than fishing  
10 with fisheries?

11 A I -- in ASR 2, we had to prove to CalAM and the  
12 Monterey Peninsula Water Management District what the flow  
13 requirements were for adult steelhead passage. To that  
14 extents, we were trained to be -- in particular by Dr.  
15 Stacy Lew to do surveys and do transit surveys and.

16 Q Could you just really quickly you mention what ASR 2  
17 is?

18 A Aquifer Storage and Recovery 2, it's a system where  
19 they're pumping excess water from the Carmel River in the  
20 winter and storing it in the ground and seaside in the  
21 summer. And then theoretically reducing the pumping from  
22 the Carmel in the summer where they extract that water.

23 HEARING OFFICER DODUC: Hold on a second.

24 MS. GOLDSMITH: I believe the testimony the oral  
25 testimony being elicited far exceeds the written testimony

1 that was submitted by Mr. LeNeve, and I object to it on  
2 that basis.

3 MR. LAZAR: Mr. LeNeve is providing his statement  
4 of qualification regarding his direct testimony.

5 MS. GOLDSMITH: His statements of qualification,  
6 Madam Chair, were not included as an exhibit in his  
7 testimony.

8 HEARING OFFICER DODUC: Ms. Goldsmith, going  
9 beyond testimony that's allowed if it's relevant to the  
10 issues at hand, I will allow you a little bit of latitude  
11 on this.

12 MR. LAZAR: Please wrap it up and move on to you  
13 your next line of questions.

14 BY MR. LAZAR:

15 Q Have you worked with certified fisheries scientists in  
16 the past?

17 A Yes.

18 Q Thank you.

19 A Three different ones.

20 Q Thank you.

21 And both in your experience working with  
22 scientists and also your experience in fisheries and as a  
23 fisherman, can you tell us about the number of fish there  
24 once were in the Big Sur River?

25 A In the two days of testimony in June, there was never

1 an answer to that question, even when asked on  
2 cross-examination. To realize how adversely impacted the  
3 fishery is, we must make an indication to what the  
4 historical amount on the Big Sur was, or at least what it  
5 was in the late 50s and 60s. I will try to give a range  
6 of numbers you can forward into evidence.

7 In his testimony, Dr. Titus stated the fishery  
8 would be the best answer to how much of the run has  
9 diminished. I believe the fishermen can also give an idea  
10 of the run on the period 1958 to 1976 --

11 HEARING OFFICER DODUC: Mr. LeNeve, let me  
12 apologize I need to interrupt again.

13 Ms. Goldsmith.

14 MS. GOLDSMITH: Well, this goes well beyond his  
15 written testimony. There's nothing in his written  
16 testimony about the historic abundance of fish.

17 MR. LE NEVE: Actually there is.

18 HEARING OFFICER DODUC: Okay.

19 MR. LE NEVE: It did say in my testimony I would  
20 relate to how much the run of the fish -- how much the run  
21 had depleted over the Big Sur River.

22 MS. GOLDSMITH: I believe there's no testimony  
23 about the depletion of fish in the Big Sur River.

24 HEARING OFFICER DODUC: Ms. Goldsmith, I'm going  
25 to allow the testimony, but we will consider your

1 objection in weighing the evidence.

2 Please continue, Mr. LeNeve.

3 MR. LAZAR: If I might comment on that, the  
4 testify he's providing also speaks -- goes to the exhibits  
5 that he provided from independent fishermen that do regard  
6 the number and frequency of fish. Those are provided as  
7 exhibits to his testimony.

8 HEARING OFFICER DODUC: I ruled in your favor,  
9 Mr. Lazar. Please continue.

10 MS. GOLDSMITH: Madam Chair.

11 HEARING OFFICER DODUC: Ms. Goldsmith.

12 MS. GOLDSMITH: If his testimony is based on  
13 those letters, it is even more objectionable. Those  
14 letters consist entirely of hearsay. They are  
15 unauthenticated. They are hearsay. Mr. LeNeve is not a  
16 qualified expert who's allowed to rely on hearsay. And  
17 even if he were, the hearsay is not the sort of hearsay  
18 that an expert would rely on. So if he's going to testify  
19 concerning his opinion based on those letters, I believe  
20 that a proper objection to all of the letters at this time  
21 is in order and that his testimony should not be allowed  
22 to rely on them.

23 HEARING OFFICER DODUC: Mr. Lazar.

24 MR. LAZAR: Thank you.

25 We've had an opportunity to have the people who

1 wrote those letters provide written verification that they  
2 wrote them. And we are available to provide those  
3 verifications upon rebuttal, if so required.

4 HEARING OFFICER DODUC: I will note your  
5 objection, Ms. Goldsmith, but I'm going to allow this  
6 testimony. But in formulating our decision, the Board  
7 will not rely on just the hearsay evidence in support of a  
8 finding of fact.

9 With that, you may continue, Mr. Lazar.

10 MR. LAZAR: Thank you.

11 BY MR. LAZAR:

12 Q You were talking about the numbers of fish in the  
13 stream.

14 A Yes. I conducted a survey of fishermen in early 80  
15 big about big many. I sent e-mail requests to let them  
16 know I was looking for information. And I conducted  
17 follow-up interviews.

18 And can we pull up CSRA-22, please?

19 With this information, I made the graph shown on  
20 CRC 22.

21 MR. LAZAR: Mr. Lindsay.

22 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
23 Sorry. What is it you need?

24 MR. LE NEVE: CRSA-22.

25 MS. GOLDSMITH: Madam Chair.

1 HEARING OFFICER DODUC: Ms. Goldsmith, we are  
2 becoming well acquainted.

3 MS. GOLDSMITH: Yes. I again object. CRSA-22  
4 was not provided until this very moment. It was not part  
5 of the testimony that was submitted by Mr. LeNeve on May  
6 19th as required by your order. And I object to testimony  
7 based on anything beyond CRSA-4, which were the only ones  
8 that were submitted in time.

9 HEARING OFFICER DODUC: Mr. Lazar or Mr. LeNeve,  
10 please explain how CRSA-22 -- is it based on evidence that  
11 you've previously submitted?

12 MR. LE NEVE: Part of it is and part of it is  
13 not.

14 HEARING OFFICER DODUC: Please explain.

15 MR. LE NEVE: When I did my -- I don't know --

16 HEARING OFFICER DODUC: As you're explaining, Mr.  
17 Lindsay, could you go ahead and put that up and we'll stop  
18 the clock. This is the chart we're talking about.

19 MR. LE NEVE: Yes. Again, not knowing what I'm  
20 supposed to be doing up here, when I did my written  
21 testimony, I commented on several things. It became  
22 apparent that I was only supposed to comment on things I  
23 was an expert at. The only thing I believe I am the  
24 expert on is what has happened on the Big Sur River over  
25 the last 50 years.

1           And so I did submit four letters, the first four  
2 up there, with my first testimony. And then it became so  
3 apparent that no one has any idea how many fish are on the  
4 Big Sur River, how many fish were on the Big Sur River, I  
5 actually sent out to get additional letters, which was  
6 after my written testimony to try to establish what the  
7 runs on the Big Sur used to be and what the runs on the  
8 Big Sur River are today. It just seems to be no idea what  
9 that is.

10           BOARD MEMBER HOPPIN: Mr. LeNeve, when we looked  
11 at this survey, you really think -- looking me in the  
12 face -- these are accurate numbers, 3,280; 150; 200; 300?  
13 Somebody just grabbed those numbers, and we all know that.  
14 How do we --

15           MR. LE NEVE: You can cross-examine me, as I'm  
16 one of the persons. Mr. Cunningham is sitting in the  
17 audience. I'm going to call him on rebuttal.

18           BOARD MEMBER HOPPIN: You know you caught 250  
19 fish in the 50s and 60s:

20           MR. LE NEVE: I'm saying all the fishermen did.  
21 The graph there is the fish that all fishermen on the  
22 river caught in the 50s and 60s.

23           BOARD MEMBER HOPPIN: That's your best guess?

24           MR. LE NEVE: By everybody's guess, yes.

25           BOARD MEMBER HOPPIN: It's a guess.

1 MR. LE NEVE: It is a guess. Yes, it is.

2 There are some people that swear they caught 78  
3 fish in one year. There's other people that swore they  
4 caught 50 fish in one year. Fishermen are pretty -- yes,  
5 they do lie. But they also very accurate and keep very  
6 good records of what they've done. And it's important to  
7 them.

8 I believe the fishermen really do have a good  
9 idea what they did. When you start adding up what we all  
10 did, the numbers are staggering.

11 HEARING OFFICER DODUC: Ms. Goldsmith, I'm sure  
12 you have more to say.

13 MS. GOLDSMITH: Well, I do. I suspect this might  
14 be something that could be offered in rebuttal. But we  
15 just got it. And I do not believe that it is proper  
16 direct evidence. And I think that it should not be  
17 discussed at this point in time.

18 HEARING OFFICER DODUC: Mr. Lazar, final words  
19 from you?

20 MR. LAZAR: In keeping with your earlier ruling  
21 on the charts that we had proposed to submit and your  
22 offering to permit submission during rebuttal, it seems  
23 like that would be a suitable compromise or suitable  
24 position on this as well.

25 HEARING OFFICER DODUC: Then let's do that.

1 MR. LE NEVE: Thank you.

2 BY MR. LAZAR:

3 Q Moving on then, Mr. LeNeve, can you tell us  
4 independently of this chart of your own experience  
5 historically fishing in the river?

6 A I did fish the river for 40 years. It was not one of  
7 my favorite rivers. It was never good to me, but I did  
8 fish it quite extensively.

9 When you're fishing, you know a lot of the other  
10 fishermen. Three of us put together a list of 77 people  
11 we knew who were fishing the river at that point in time.  
12 That doesn't count the people we didn't know. So you have  
13 a pretty good idea what other people are doing because,  
14 number one, you're jealous when they catch more fish than  
15 you. And number two, it's just an indication as to  
16 whether you should go back or not how many fish people are  
17 catching.

18 Q Did you at some point stop fishing in the river?

19 A Yes, I did.

20 Q And when was that?

21 A I started slowing down in the mid-70s, because I was  
22 already seeing a lack of fish. There just weren't the  
23 fish there that there used to be.

24 When I was fishing myself, there was a period  
25 when face masks were legal to be used. When we could use

1 face masks -- we, meaning a group of quite a few  
2 fishermen -- who look at every logjam, every willow, every  
3 rock, we knew what parts of the run those fish were laying  
4 in. So we all had counts we made of the fish.

5           And my personal high count in one day was 78  
6 fish. I think my personal high -- I didn't really record  
7 this, but I think my personal high on the Big Sur River  
8 was probably around ten fish on the Big Sur, out of maybe  
9 40 fish on the coastal rivers.

10 Q    Now what can you tell us about the number of fish in  
11 the river now?

12 A    I heard a total of three fish being caught last year.

13 Q    You're saying three?

14 A    Three. Mr. Cunningham, who is in the audience right  
15 now, and he keeps pretty good records. He can tell you  
16 how many fish he caught every year, since his high was 78.

17           HEARING OFFICER DODUC: Ms. Goldsmith.

18           MS. GOLDSMITH: Objection.

19           HEARING OFFICER DODUC: Sorry. I need to  
20 interrupt you for a very important procedural discussion.

21           As much as I would like to wrap this up today, I  
22 would like to get a sense of whether we need to have an  
23 extra day scheduled.

24           At this point, what sort of rebuttal are we  
25 looking at in terms of your rebuttal witnesses, Ms.

1 Goldsmith?

2 MS. GOLDSMITH: We have five rebuttal witnesses,  
3 one of whom is going to be leaving for Shanghai at the end  
4 of the month and is currently out here today from east  
5 coast. So if we could at least get him on today, I would  
6 appreciate it.

7 HEARING OFFICER DODUC: I'm sure nobody will want  
8 to cross. Okay.

9 Fish and Game, do you have rebuttal witnesses?

10 MS. FERRARI: We have one.

11 HEARING OFFICER DODUC: Okay. Mr. Lazar?

12 MR. LAZAR: We have two.

13 HEARING OFFICER DODUC: Mr. Johnson, are you  
14 calling someone to rebut yourself or --

15 MR. JOHNSON: No. I'm quite capable of rebutting  
16 myself. I'm going to call one person. It's probably a  
17 total of five minutes for mine.

18 HEARING OFFICER DODUC: Okay.

19 MR. JOHNSON: That's it.

20 HEARING OFFICER DODUC: We know Mr. LeNeve has  
21 rebuttal.

22 Sounds like we are going to -- unless we want to  
23 stay here until midnight -- well, let me ask. Of your  
24 five witnesses, how much time do you expect needing?

25 MS. GOLDSMITH: I think we probably have

1 two-and-a-half hours.

2 HEARING OFFICER DODUC: Okay. We are going to  
3 need another day. We are looking at Monday.

4 MS. GOLDSMITH: I have a conflict that is  
5 immovable.

6 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
7 I'll have to find some other day. I have 15 minutes to  
8 book a court reporter. That's why we're asking right now  
9 for Monday.

10 HEARING OFFICER DODUC: Can you make any  
11 arrangements, Ms. Goldsmith? Any other parties have  
12 problems with Monday? Mr. LeNeve.

13 MR. LE NEVE: Work-wise, I have an incredible  
14 workload on Monday, in particular. Any other day, it  
15 would be fine with me.

16 HEARING OFFICER DODUC: Okay. Since I need to  
17 have my stiches removed on Monday, let's go ahead and find  
18 another day.

19 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
20 Monday it out. We'll worry about it later.

21 HEARING OFFICER DODUC: I apologize for the --  
22 unless you're about to give me good news that you --

23 MS. GOLDSMITH: Well, my associate will be able  
24 to cover on the 11th.

25 HEARING OFFICER DODUC: Which is Monday.

1           Mr. LeNeve, that only leaves you. Can we get  
2 through your rebuttal today? Mr. Cunningham is still in  
3 the audience.

4           MR. LE NEVE: Based on the way things have been  
5 going, probably not, because everything takes about three  
6 times as long. But I would think so, yes.

7           HEARING OFFICER DODUC: Let's shoot for that.  
8 And let's go ahead and reserve the room for Monday.

9           MR. LAZAR: Chairperson Doduc, I believe my  
10 witnesses have conflicts.

11          MR. SHUTZ: Brian Johnson and I both have --

12          HEARING OFFICER DODUC: All of this didn't have  
13 to be on the record. But --

14          MR. SHUTZ: Mr. Johnson and I have a meeting with  
15 members of the Irrigation Districts Board of Directors on  
16 Monday. It's been scheduled for a couple of months. We  
17 could try to move it, but it's been challenging to find  
18 days that work.

19          HEARING OFFICER DODUC: It's been challenging to  
20 find dates to wrap this up as well. It's my preference to  
21 wrap this up on Monday. I'm sorry for the inconvenience.  
22 It's an inconvenience to Ms. Goldsmith as well. But let's  
23 try to do it Monday.

24          MS. GOLDSMITH: I would appreciate it, and I'm  
25 sure Mr. LeNeve and Mr. Cunningham, if we can try to get

1 through at least one of my rebuttal witnesses from the  
2 east coast today.

3 HEARING OFFICER DODUC: Yes.

4 MR. BERLINER: Ms. Goldsmith and I didn't get a  
5 chance to confer prior to -- we have actually two  
6 witnesses that have obligations out of state. And so if  
7 we could get both of them on today, that would be great.

8 HEARING OFFICER DODUC: Okay. Let's do that,  
9 because even with those two out of the way, I believe we  
10 will still need another day.

11 MR. BERLINER: I believe you're correct.

12 HEARING OFFICER DODUC: Let's go ahead and book  
13 the room for Monday.

14 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
15 Thank you.

16 HEARING OFFICER DODUC: Ms. Goldsmith.

17 MS. GOLDSMITH: I remember. I have an objection  
18 that I'd like to be a standing objection.

19 HEARING OFFICER DODUC: Since you're standing,  
20 that works.

21 MS. GOLDSMITH: Standing objection, meaning for  
22 the entire testimony as to the fact that most everything  
23 that Mr. LeNeve is going to be testifying to is hearsay.  
24 And I object on that basis.

25 HEARING OFFICER DODUC: Thank you. We'll note

1 your objection and -- your standing objection. And we'll  
2 consider it in weighing the evidence or the testimony in  
3 this case.

4 All right. I'm not sure where you were, Mr.  
5 LeNeve, but hopefully you remember.

6 MR. LE NEVE: I am hoping my counsel remembers.  
7 Cannibalizing my program here, but anyway --

8 BY MR. LAZAR:

9 Q What can you tell us about the current experience  
10 fishing in the Big Sur River, your current experience?

11 A I haven't personally fished the Big Sur River since  
12 1995. And the reason is I gave up hope catching fish  
13 there. I heard of a total of three fish being taken this  
14 year. There just aren't people fishing the Big Sur River.  
15 There's a few people fishing it who are going down there  
16 because they want to fish somewhere and still the best  
17 bet. I know maybe only half a dozen good fisherman ever  
18 even go down there. It's because it just -- there's so  
19 few fish.

20 Q In your experience, what can you tell us about when  
21 the adult fish enter the river?

22 A From my personal experience, it would be early  
23 November the earliest I have seen fish in the river. I've  
24 talked to other people who are -- going back to hearsay --  
25 but my personal experience, it was November that is

1 earliest I've ever seen fish in the river. That doesn't  
2 mean they weren't there. That means I wasn't there.

3 Q So although it's been characterized as hearsay by  
4 others and yourself, you have heard from other fishermen  
5 that the adult steelhead enter the river before November?

6 A Yes. One of the letters that was submitted before now  
7 was from Mr. Frank Emerson. And he accounted pretty  
8 elaborately. I don't know what year it was. He caught  
9 five or six adult fish in September. And he does know  
10 what an adult fish is and he does know a sexually mature  
11 fish. And he caught quite a few fish that one year in  
12 September. And I know of other people that -- again that  
13 told me they've caught fish September, October, and  
14 November.

15 Q Now, the term in fishing is used, "half pounders."  
16 Were these half pounders we're talking about?

17 A No. Half pounders are -- it's an arbitrary term.  
18 Most people think up to three pounds. Some of the fish he  
19 caught were six, six-and-a-half pounds.

20 Q And what can you tell us about silver salmon in the  
21 Big Sur River?

22 A Throughout my history, I've always heard people taking  
23 silver salmon out of the Big Sur. Some people would go  
24 down there and actually target these fish in the early  
25 part of the season.

1           I do know -- again, it's hearsay, but a friend of  
2 mine who lives on the Big Sur River tells me that he saw  
3 silver salmon in the Big Sur two years ago.

4 Q     Did you notice any study of salmon or impacts on  
5 salmon in the environmental impact report?

6 A     No. No, not even a mention of salmon.

7 Q     And have you heard testimony suggesting that salmon  
8 would be protected by the proposed bypass flows?

9 A     No.

10 Q    Is there any additional information you'd like to add  
11 regarding the numbers of fish or the salmon that we don't  
12 need to address I guess in rebuttal testimony, but we're  
13 going over this chart later on.

14 A    It's anecdotal. I've heard Dr. Titus said 300 fish  
15 was the estimate DFG did in 1965. There was an estimate  
16 throughout the day of run being 270 fish. I have  
17 personally seen 75 first in one day. Mr. Cunningham has  
18 personally seen I think it was 200 fish in one day.

19           There's no way the run could have been that  
20 small. The run on the Big Sur River was significantly  
21 larger than any of the "experts" have testified to, simply  
22 because the number of fish we saw were just too great and  
23 the number of fish we caught were too great.

24 Q    In other words, just based on your own fishing  
25 experience historically, the number of fish you caught,

1 you'd have to literally caught a third of the fish in the  
2 stream for these numbers to work?

3 A Yes. Yes. I mean, in my personal estimation of the  
4 run on the Big Sur River was 2,000 fish. But again, that  
5 is based on 40 years of fishing and you know --

6 Q You did used to count?

7 A I did used to count.

8 Q You used to put a fish mask on and count.

9 A I used to put a face mask on and count them. Only  
10 when it was legal.

11 MR. LAZAR: I have no further direct questions.  
12 Thank you.

13 HEARING OFFICER DODUC: Thank you, Mr. Lazar.  
14 Ms. Ferrari, does the Department have cross?  
15 Mr. Lazar, do you have cross on behalf of the  
16 CSPA?

17 MR. LAZAR: No, thank you.

18 HEARING OFFICER DODUC: Mr. Johnson, do you have  
19 cross?

20 MR. JOHNSON: No.

21 HEARING OFFICER DODUC: Thank you. And I assume  
22 there would be no direct redirect because there is no  
23 cross.

24 I'm sorry, Ms. Goldsmith. I totally forgot about  
25 you. Do you have cross? See what happens when you're not

1 standing up and objecting?

2 MS. GOLDSMITH: I can't imagine how you could  
3 forget about me.

4 CROSS-EXAMINATION

5 BY MS. GOLDSMITH:

6 Q We've talked about a long history of your experience  
7 with the Big Sur River?

8 A Yes.

9 Q And most of the substance of your testimony has to do  
10 with what other folks have told you about what they caught  
11 and what they saw; isn't that right?

12 A What other people have told me and what I have  
13 personally seen also.

14 Q And when you -- did you actually count 2,000 fish in  
15 the river?

16 A No.

17 Q And when you went down with the face mask, did you  
18 snorkel the entire river?

19 A No. We weren't snorkeling. We were just laying on  
20 the bank looking into the holes.

21 Q Just laying in wait.

22 And you're aware that the Fish and Game  
23 Department planted fish in the Big Sur River?

24 A Yes, I am.

25 Q Until 1975?

1 A I don't know what year they quit, but I do know they  
2 planted fish, yes.

3 Q And that would cover some of your experience with the  
4 Big Sur River?

5 A If those fish when I was talking about -- adults now,  
6 not juveniles. So my experience was during that period of  
7 time -- whether they affected the adult run of the river  
8 or not I don't know.

9 MS. GOLDSMITH: That's all the questions I have.  
10 Thank you.

11 HEARING OFFICER DODUC: Thank you Ms. Goldsmith.  
12 Any redirect, Mr. Lazar?

13 MR. LAZAR: No.

14 HEARING OFFICER DODUC: Thank you.

15 With that, you wish to move your exhibits into  
16 evidence?

17 MR. LE NEVE: Yes, I do.

18 HEARING OFFICER DODUC: I'm sorry.  
19 Are there any questions up here?

20 MR. LE NEVE: I would wish to move exhibits CRSA  
21 6 through 23 into evidence.

22 HEARING OFFICER DODUC: Ms. Goldsmith.

23 MS. GOLDSMITH: I'd like to do this one by one.  
24 CRSA Exhibit 2 is a letter from Shadwell. I  
25 object on the basis it was hearsay and lacks foundation.

1           CRSA 3 is a letter from Zobel. I object on the  
2 grounds it was hearsay and lacks foundation.

3           CRSA 4 is a letter from Neidinger. I object on  
4 the grounds it was hearsay and lacks foundation; it was  
5 also irrelevant.

6           Number 5 is a letter from Emerson. I object on  
7 the grounds of hearsay and lack of foundation.

8           I believe that exhibits 6 through 23 are the  
9 exhibits that he mentioned this morning, and they are not  
10 yet ripe for offering into evidence.

11           HEARING OFFICER DODUC: You're correct with  
12 respect to CRSA 6 through 23. I think we discussed those  
13 being part of your rebuttal. So we won't move those at  
14 this time.

15           SENIOR STAFF COUNSEL MAHANEY: And do you want to  
16 move in CRSA 1 through 5? I think he started with 6.

17           MR. LE NEVE: Yes. Again, not knowing the rules,  
18 I would assume that 1 through 5 were already there. But  
19 in this case I would like to move into evidence CRSA  
20 exhibits 1 through 5.

21           HEARING OFFICER DODUC: And we heard Ms.  
22 Goldsmith's objections to CRSA 1 through 5.

23           MS. GOLDSMITH: Well, actually CRSA 1 is Mr.  
24 LeNeve's testimony and I don't have an objection to that.

25           HEARING OFFICER DODUC: Any other objections?

1 All right. With that, I will go ahead and move  
2 CRSA 1 through 5 into evidence. We'll note Ms.  
3 Goldsmith's objections and consider it in weighing the  
4 evidence.

5 (Whereupon CRSA Exhibits 1-5 were  
6 admitted into evidence.)

7 HEARING OFFICER DODUC: We need a break. I think  
8 I need a break.

9 So Let's take a short -- well, let's resume at  
10 2:40. That's less than a ten-minute break.

11 Our counsel has advised me of something that I  
12 think will be very helpful.

13 Mr. Lazar, if I could have your attention,  
14 please.

15 When we resume after the break, we will start  
16 doing rebuttal starting with the two witnesses from El Sir  
17 Ranch that need to get done today.

18 Ms. Goldsmith, at this time do you wish to share  
19 any rebuttal exhibits so that the parties would have some  
20 time to examine them during the break?

21 MS. GOLDSMITH: Yes. I have two exhibits for my  
22 first witness.

23 HEARING OFFICER DODUC: And how many exhibits for  
24 your second witness? Since we're hoping to do two of them  
25 today.

1 MS. GOLDSMITH: Mr. Berliner is going to be  
2 handling the second witness, and I have no idea.

3 MR. BERLINER: Be back to you in just a second.

4 SENIOR STAFF COUNSEL MAHANEY: While we're  
5 waiting, Ms. Lockwood also then filed to present a case in  
6 chief but she has not appeared any day at this hearing,  
7 and her testimony has neither been moved or accepted into  
8 evidence.

9 HEARING OFFICER DODUC: Thank you, Ms. Mahaney.  
10 Well, we'll let El Sur Ranch sort that out.

11 Please share your exhibits with the parties. It  
12 sounds like you'll have somewhere from four to five  
13 exhibits to share.

14 MR. LAZAR: Chairperson Doduc, are you referring  
15 to exhibits for just the witnesses who are testifying  
16 today or the --

17 HEARING OFFICER DODUC: Just the ones testifying  
18 today for now.

19 MR. LAZAR: Okay.

20 HEARING OFFICER DODUC: Actually, obviously  
21 they'll have to be all shared with the parties.

22 MR. LAZAR: Do you have a plan or a suggestion to  
23 submit the exhibits prior to Monday then or --

24 HEARING OFFICER DODUC: Yes. I would like to  
25 have the rebuttal exhibits be distributed to all the

1 parties today and everyone be prepared for Monday.

2 MR. LAZAR: Thank you.

3 HEARING OFFICER DODUC: Ms. Goldsmith, are you  
4 ready?

5 Well, then let's go ahead and -- go ahead and  
6 take a break and we will resume at 2:50. That will give  
7 you a little bit of time to look over the exhibits.

8 (Whereupon a recess was taken.)

9 HEARING OFFICER DODUC: I am strongly encouraging  
10 you to be as efficient as possible in your direct. And  
11 since it's a relatively -- looks like it's short  
12 testimony, let's start with ten minutes and then we'll see  
13 how it goes.

14 MS. GOLDSMITH: I think 20 is realistic.

15 HEARING OFFICER DODUC: I'll motivate you. Let's  
16 start with ten and we'll see if we can --

17 MS. GOLDSMITH: I always get to be --

18 HEARING OFFICER DODUC: I have some faith in you.

19 DIRECT EXAMINATION

20 BY MS. GOLDSMITH:

21 Q Dr. Harvey --

22 A Yes.

23 Q Is ESR -- what's the next one? What is the next in  
24 order?

25 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:

1 Sorry. I was listening to your assistant here.

2 MS. GOLDSMITH: ESR --

3 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:

4 -- 48 would be the next number.

5 BY MS. GOLDSMITH:

6 Q -- 48 an accurate description of your qualifications,  
7 education, and experience in hydrology and hydrogeology?

8 A Yes, it is.

9 Q And would you please briefly, apparently, describe  
10 your education and professional background?

11 A I graduated from Oakland College in 1986 with a BS in  
12 Mathematics. I worked for a year with USGS and then moved  
13 out here to California where I worked at USGS in Menlo  
14 Park and got a Masters and PhD in hydrogeology from  
15 Stanford University.

16 Q And after receiving your PhD, what did you do?

17 A I was faculty at Harvard University for a year and a  
18 half; and then moved over to MIT, Massachusetts Institute  
19 of Technology; and I'm currently a full professor in the  
20 Department of Civil and Environmental Engineering.

21 Q What are your duties as a full professor of  
22 environmental engineering?

23 A My duties as a professor, partially teaching and  
24 largely research.

25 Q What classes do you teach?

1 A I teach some undergraduate broad environmental science  
2 courses and graduate courses in hydrology and  
3 hydrogeology.

4 Q Have you received any -- I'll cut this short. I see  
5 that you've received an award from the National  
6 Groundwater Association. Can you tell us what that was  
7 and what it was for?

8 A I believe the citation says for the scientific  
9 contributions to the groundwaters industry.

10 Q Major science or engineering contributions to the  
11 groundwater industry.

12 And you have published extensively in the field?

13 A I have.

14 Q Now, have you in the course of your career  
15 investigated -- well, first of all, I would ask to have  
16 Dr. Charles Harvey accepted as an expert in hydrology and  
17 geohydrology -- or hydrogeologist.

18 HEARING OFFICER DODUC:

19 BOARD MEMBER HOPPIN: I know his educational  
20 background is a little shallow.

21 (Laughter.)

22 MS. GOLDSMITH: He's local.

23 HEARING OFFICER DODUC: He didn't graduate from  
24 Cal Berkeley, so I'm not sure.

25 Any objections?

1           We will so accept that.

2           MS. GOLDSMITH: Thank you.

3 BY MS. GOLDSMITH:

4 Q     Have you investigated groundwater and surface water  
5 interactions in the course of your career?

6 A     Yes. I have a field site where I've been working on  
7 Cape Cod for over a decade studying the interaction of  
8 groundwater and the ocean.

9           I also had field sites in Bangladesh and Vietnam  
10 which focused in large part on groundwater interaction  
11 with rivers and lakes.

12 Q     You've reviewed the SGI reports of their 2004, 2006  
13 and 2007 investigations of the Big Sur River?

14 A     Yes.

15 Q     And you have reviewed the testimony and exhibits  
16 submitted by the Department of Fish and Game by Mr. Kit  
17 Custis?

18 A     Yes.

19 Q     And you were present for the testimony in this hearing  
20 on June 16th and 17th?

21 A     I was here.

22 Q     Thank you.

23           Now, do you remember Mr. Custis' metaphor of the  
24 bathtub to describe the hydrology of the Big Sur River  
25 below the Andrew Molera State Park?

1           Let me read it to you just in case you don't  
2 remember.

3           This is from page 116 of the transcript for June  
4 17th. And this is Mr. Custis.

5           "To convince my lawyers what I was talking about,  
6 I put out there what I call a bathtub model. Okay.  
7 You've got a bathtub that's full. And you've got a good  
8 drain. It's got to have a good drain. You pop the plug  
9 and you'll create a whirlpool. Water goes out through the  
10 drain through the whirlpool. That whirlpool expands to a  
11 certain diameter, but you will still drain that entire  
12 bathtub without the whirlpool having to go all the way  
13 across the bathtub.

14           "So the whirlpool is my zone of influence, my  
15 zone of depression from the well. But it's being fed  
16 laterally from water outside of it as the water -- so if  
17 you don't replace it, the whole bathtub drains. So what  
18 I'm saying is you've got to replace it to keep that  
19 aquifer up."

20           That was the testimony that you remember?

21 A       Sounds right, yes.

22 Q       Do you have an opinion concerning the accuracy of that  
23 description of hydrology for the Big Sur River?

24 A       Well, I think it's a useful analogy to clarify the  
25 concept that if you have a closed system with no inflows

1 or outflows and you drain it, it empties at the same rate  
2 that you drain it.

3 Q The same rate that goes out through the drain?

4 A That's right. Yeah, very simple concept.

5 It leaves off some of the basic features of the  
6 Big Sur River aquifer, notably exchange with the river.  
7 There's no input or output from the bathtub.

8 Q Did you prepare some visuals to explain what this  
9 bathtub concept is and what is or is not missing from it?

10 A Yes, I did.

11 Q This will be ESR-49A, which is Water Balance in the  
12 Zone of Influence without Pumping; and 49B, which is a  
13 page that says Pumping Extracts Water from Storage and  
14 Changes Flux in and out of the System.

15 Okay. Now, could you walk us through the  
16 non-pumping visual that you've prepared for ESR 49A.

17 A Okay, yeah. I made this to illustrate the water  
18 balance within the zone of influence of the pumping wells.

19 So the first thing is I'm imagining a zone of  
20 influence that extends upstream from the wells and extends  
21 downstream from the wells. And outside of that, the  
22 pumping has no influence, has no effect on the flows of  
23 water. So --

24 Q If I could stop you there just for clarification.

25 This cylinder is not intended to illustrate the

1 entire alluvium of the Big Sur Valley; is that correct?

2 A No, just the region that's influenced by pumping.

3 Q Is that essentially the whirlpool that Mr. Custis  
4 would have referred to?

5 A Perhaps whirlpool, perhaps the whole bathtub.

6 Q Well, the bathtub was the entire basin.

7 A That's true. So I don't know exactly what he was  
8 referring to by the whirlpool. But I think he was  
9 alluding to a zone of influence that beyond that pumping  
10 would not have an effect. On the other hand the whole  
11 bathtub is drained.

12 Q Is your cylinder here generally aerielly consistent or  
13 would it be consistent with the zone of influence as  
14 depicted by SGI in their plan view, the maximum radius  
15 which is of the zone of influence of the wells?

16 A Roughly, yes.

17 Q Okay. So that's with the cylinder. Please proceed.

18 A Okay. So the -- I drew this to depict a situation  
19 where there's no movement of the water table, that the  
20 aquifer is a steady state. So the storage water isn't  
21 changing. It is dry season when there's not  
22 precipitation.

23 And then I looked at the -- or illustrated the  
24 different flows in and out of it. So if you look on the  
25 right side -- and can I use the pointer actually, is that

1 all right? Go back -- we have an inflow of groundwater  
2 from upgrading it that's outside of the zone of influence.  
3 So there's a rate high of water flowing in that's  
4 independent of pumping within the zone of influence.  
5 There's transpiration by trees and perhaps an evaporation  
6 going out. And then there's exchange with the river.  
7 This could be either from the groundwater to the river or  
8 vice versa. And then there's discharge on the down  
9 gradient end towards the ocean and perhaps discharge  
10 directly into the ocean.

11 Now, some of these are positive, some of them are  
12 negative. That's negative, that's positive.

13 Q "That" being the discharge to the ocean is negative?

14 A Yes, the discharge to the ocean, I gave the letter D  
15 to, would be negative. Transpiration is negative. R  
16 could -- the exchange of the river could be either way.

17 The point is if you add up all of these things,  
18 the inputs have to equal the outputs, so they're based on  
19 just zero. And this is really meant to set up the second  
20 illustration.

21 Q Please go to the second, ESR-49B, please.

22 A Okay. So this cartoon is meant to illustrate what  
23 happens when you put a well in and start to pump it. And  
24 the basic principle on this, we've heard in these  
25 hearings, is the water has to come from somewhere. And

1 there's a variety of potential sources.

2           Initially, water largely comes from storage. And  
3 by that, I mean this is where the water table used to be;  
4 it's lowered down; there's a cone of depression created.  
5 And water simply coming out of the pores as the water  
6 table is lowered. And that can accommodate the pumping  
7 initially.

8           There also may be inflow of ocean waters, saline  
9 intrusion. And that's sort of a similar process from  
10 underneath where the seawater is displacing the fresh  
11 water, and the fresh water can accommodate the pumping.

12           So those are the changes in storage.

13           The other changes, for instance, the inflow from  
14 upgradient don't change because it's outside the zone of  
15 influence. So that's still coming in.

16           Exchange with the river could change, because you  
17 simply lower the water table into the river, so you're  
18 going to decrease outflows to the river and draw water in  
19 from the river. And if the zone of influence extends all  
20 the way to the ocean, then you could decrease fresh water  
21 discharging straight into the ocean.

22           So if we sum up all those guys, they don't sum up  
23 to zero anymore. They sum up to the pumping rate. That's  
24 the point. We're looking at how the changes in flows and  
25 the rates of water being withdrawn from storage have to

1 sum up to explain the amount of water extracted from the  
2 well.

3 Q So Q is a rate?

4 A Q is a rate. This is the change in a rate.

5 Q R is the change in a rate.

6 A Yeah, which is still a rate.

7 Q Is S --

8 A S is a rate of water coming out of storage. And W is  
9 a rate of water being displaced by seawater intrusion.

10 And all of these things change with time. But  
11 initially the water is coming largely from S and perhaps  
12 from W.

13 But at sometime the system stabilizes,  
14 equilibrates, and there's no longer water coming out of  
15 storage. And now all the pumping is coming really from  
16 two sources: One is net reduction in exchange with the  
17 river; and the other is potentially decrease in fresh  
18 water discharge straight into the ocean.

19 BOARD MEMBER HOPPIN: Ms. Goldsmith, do you mind  
20 if I asked your witness a question at this point?

21 MS. GOLDSMITH: Please.

22 BOARD MEMBER HOPPIN. You want to stop the clock.

23 HEARING OFFICER DODUC: Actually, she was out of  
24 time anyway.

25 MS. GOLDSMITH: I just have a couple more

1 questions.

2 BOARD MEMBER HOPPIN: Mr. Harvey, with the  
3 diagram you've got in front of us you show a cone of  
4 depression for storage loss directly below the point of  
5 extraction. Would that have any abnormal effect on the  
6 saline intrusion? Would you be more likely to have saline  
7 intrusion at this depressed point or would it be pretty  
8 much equal across the point of --

9 A You'd be more likely to have it at the most depressed  
10 point, everything else held equal. There's also a  
11 geometry to the underlying hardrock, bedrock underneath it  
12 which could effect it.

13 MS. GOLDSMITH: I believe Mr. Horton will  
14 elaborate on that as it relates to this particular system.  
15 I wanted to get Dr. Harvey basically talking about the  
16 general principles of the bathtub and all.

17 So I do have some more questions, if I may.

18 HEARING OFFICER DODUC: Go ahead.

19 BY MS. GOLDSMITH:

20 Q Did you finish discussing this?

21 A I believe I did, yes. Thank you.

22 Q Seemed like you did.

23 Now, Mr. Custis used an SDF model, as you heard  
24 him testify. Do you have an opinion concerning whether  
25 the SDF model provides an accurate description of the

1 impact of pumping of the El Sur wells on the surface water  
2 of the Big Sur River?

3 A Yeah. Like the bathtub model, it's sort of a useful  
4 conceptual analogy to think about how a system works. And  
5 in this case, it goes a step further, and it's useful to  
6 think about how water initially comes to storage, and then  
7 over time comes from other sources.

8 The primary shortcomings of that model in  
9 application to the Big Sur aquifer, I would say, have to  
10 do with the assumption in the model that all boundaries  
11 are infinitely far away.

12 So there are two types of boundaries and they're  
13 particularly important for the Big Sur River. One is  
14 effectively no flow boundaries at the low permeability  
15 deposits on one side and the older Franciscan deposits on  
16 the other side. And there also would be -- the boundary  
17 would be ocean.

18 So if the zone of influence reaches the ocean,  
19 then the ocean acts as a fairly complicated system that  
20 happens at the ocean.

21 First approximation, the head of the ocean in the  
22 groundwater is basically equal to sea level. And so if  
23 the zone of influence extends to that, then that could --  
24 would decrease outflow to the ocean, and that would  
25 provide another source of water other than just the

1 rivers.

2 Q Then go back to Board Member Hoppin's question about  
3 salinity intrusion. If the outflow to the ocean is  
4 decreased --

5 A Yes.

6 Q -- then the saline wedge would move in further under  
7 the fresh water; is that right?

8 A Yes.

9 Q And that doesn't mean that the river will become  
10 salty, right?

11 A No, no. I mean, it was -- you would have turned off  
12 the wells long before the river would become salty,  
13 because they would be extracting seawater before that  
14 happens.

15 Q Now, unless the Board has any further questions about  
16 the SDF model, I'd like to ask whether or not you agree  
17 with Dr. Custis' testimony, which is on page 115 at lines  
18 10-14, where it says -- one of the problems he had with  
19 the studies that were done by SGI was that, "first of all,  
20 they assumed that the zone of influence is the only place  
21 you can lose water, and that's not correct."

22 Do you agree with that?

23 A Yeah, it's kind of a matter of --

24 Q Yes, you agree with that?

25 A No, I don't agree with that.

1           Good enough.

2   Q     Please explain.

3   A     Well, it's a matter of language.

4           I mean, I think of the zone of influence as the  
5 zone in which you influence water flows influenced by  
6 pumping. So outside of that zone, more or less by  
7 definition, you're not extracting water, you're not  
8 changing the flows.

9   Q     There was discussion -- I'm sorry.

10  A     I'm done.

11  Q     There was a description in the first two days of  
12 hearing about a residual impact on groundwater and river  
13 flow that continues even after a well has stopped --

14           HEARING OFFICER DODUC: We can't hear you, Ms.  
15 Goldsmith.

16  BY MS. GOLDSMITH:

17  Q     There was discussion of a residual impact on  
18 groundwater and river flow that continues even after a  
19 well has stopped pumping.

20           Do you remember that testimony?

21  A     Yes, I do.

22  Q     Could you generally describe the residual impact that  
23 occurs when the El Sur wells stop pumping?

24           Theoretical matter.

25  A     Yes. So when they stop pumping, then the water table

1 and the hands of the aquifer rebound to where they were  
2 before. And the time scale of that is roughly the same,  
3 hence the time scale at which the drawdown cone developed.

4 Q Is it your opinion that the aerial extents of the zone  
5 of influence of the wells can expand after the wells have  
6 turned off?

7 A Not in any way that is of practical importance. In  
8 part because of the river itself is a constant head  
9 boundary above the aquifer. And then on the other side of  
10 the wells there's an inflow boundary. And it's going to  
11 be difficult to expand in light of those corrections.

12 MS. GOLDSMITH: That's all the questions I have.

13 HEARING OFFICER DODUC: Great. Thank you, Ms.  
14 Goldsmith.

15 Why don't we go ahead and bring up your second  
16 rebuttal witness.

17 STAFF GEOLOGIST MURPHEY: Excuse me. Ms.  
18 Goldsmith, before you continue --

19 MS. GOLDSMITH: I'd prefer it if we --

20 STAFF GEOLOGIST MURPHEY: Well, I just want to  
21 clarify the exhibits, because you identified two that we  
22 have several -- we have several. We have Dr. Dettman's  
23 technical memorandum -- I'm sorry -- Dr. Dudley Reiser's  
24 technical memorandum. We have --

25 MS. GOLDSMITH: We have Charles Harvey's CV,

1 which is ESR-48.

2 STAFF GEOLOGIST MURPHEY: Okay.

3 MS. GOLDSMITH: And we have a two-page schematic  
4 graphic.

5 STAFF GEOLOGIST MURPHEY: 48A and B, correct.

6 MS. GOLDSMITH: And this was 49A and B.

7 STAFF GEOLOGIST MURPHEY: Okay. And this  
8 technical memorandum. Okay.

9 HEARING OFFICER DODUC: This is coming up.

10 Ms. Goldsmith, you were efficient. You were done  
11 in 15 minutes.

12 MS. GOLDSMITH: Don't expect it on the next ones.

13 MR. BERLINER: We're using a PowerPoint. We need  
14 to get it loaded up.

15 HEARING OFFICER DODUC: Please.

16 MR. BERLINER: Good afternoon. My name is Tom  
17 Berliner, counsel for the El Sur Ranch.

18 DIRECT EXAMINATION

19 BY MR. BERLINER:

20 Q Dr. Reiser, would you please state your name for the  
21 record.

22 A Yes. Dudley W. Reiser. Last name is spelled  
23 R-e-i-s-e-r.

24 Q And have you provided a true and correct copy of your  
25 CV to the Board?

1 A Yes, I have.

2 Q And in order to save time, if I might, the CV speaks  
3 for itself, and I won't ask Dr. Reiser to run through his  
4 credentials.

5 HEARING OFFICER DODUC: Thank you, Mr. Berliner.

6 BY MR. BERLINER:

7 Q I will ask briefly, did you and your firm prepare the  
8 policy for maintaining instream flows in northern  
9 California coastal streams for the State Water Resources  
10 Control Board?

11 A Yes. Our firm, R2 Resource Consultants, working with  
12 Stetson Engineers and a variety of colleagues, were  
13 involved in putting that policy together, yes.

14 Q And had you had formal training in aquatic entomology?

15 A Yes.

16 Q And have you participated in studies on that subject?

17 A I have, yes.

18 MR. BERLINER: I'd like to ask that Dr. Reiser be  
19 qualified as an expert before the Board.

20 HEARING OFFICER DODUC: Any objections?

21 All right. So accepted.

22 MR. BERLINER: Thank you.

23 BY MR. BERLINER:

24 Q Dr. Reiser, I would like to talk to you today about  
25 two subjects: The first is an issue that came up in the

1 last hearing regarding food production on the Big Sur  
2 River; and the second is the wetted perimeter analysis  
3 that was conducted by Dr. Titus.

4 Let's start with food production. Were you here  
5 when I cross-examined Dr. Titus on June 17th?

6 A Yes, I was.

7 Q Do you recall that I asked Dr. Titus about the  
8 production of food on the Big Sur River?

9 A Yes.

10 Q And do you also recall that I noted that there were  
11 about 150,000 feet of river upstream of the El Sur Ranch  
12 reach of the river and that the ranch diverts at  
13 approximately the last thousand feet above the lagoon?

14 A Generally, I remember that, yes.

15 Q Do you also recall that Dr. Titus contended that the  
16 upstream river -- or the river upstream of the ranch reach  
17 does not contribute to food availability in the ranch  
18 reach?

19 A Yes, I do.

20 Q Do you agree with Dr. Titus' contentions?

21 A No, I don't.

22 Q Do you also recall that Dr. Titus contended that the  
23 only food available to fish in the ranch reach was food  
24 produced in that reach?

25 A Yes, I remember that, yes.

1 Q Do you agree with Dr. Titus' contentions in that  
2 respect?

3 A Based upon information that I have, no.

4 Q Okay. I'd like to ask for the first slide as part of  
5 our PowerPoint.

6 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
7 What is your first slide?

8 MR. BERLINER: That's it.

9 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
10 This slide right here?

11 MR. BERLINER: Yes, that's correct.

12 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
13 Thank you.

14 --o0o--

15 BY MR. BERLINER:

16 Q Dr. Reiser, this slide is entitled "Behavioral Drift"  
17 and identifies active drift and passive drift.

18 Could you briefly describe each of these types of  
19 drift.

20 A Yes, actually behavioral drift is one of three  
21 categories of drift. There's actually catastrophic drift  
22 and constant drift. But the behavioral drift is the type  
23 of drift that would be most applicable during the majority  
24 of the flow conditions in the river. And basically, what  
25 you have behavioral drift is you'll have organisms,

1 invertebrates, entering the water column. Some of those  
2 do so actively. They do this to escape from predators,  
3 escape from predation as they search for food, they search  
4 for space.

5           Some of them will also accidentally enter the  
6 drift. If they get too close to a turbulent riffle area,  
7 they might actually be swept away from that point and  
8 accidentally enter the drift. That would be called  
9 passive drift.

10           The figure that's displayed here too shows  
11 general patterns of invertebrate drift, this behavioral  
12 drift. And if you look at the top figure, you can see  
13 this is a 24-hour day period on the bottom on the X axis.

14           And if you look, you know, you're seeing light  
15 intensity at the top draft. You can see light intensity's  
16 high and then you start getting into dusk and dawn and  
17 you'll see trout feeding behavior. Some of these  
18 researchers have looked at the timing of when fish feed.  
19 Ask a fisherman as to where and when fish are actively  
20 feeding, and they'll tell you a lot of the times it's  
21 during the dawn and dusk periods. The reason for that is  
22 because the invertebrates have become sensitized and they  
23 have adapted to that to avoid predation basically.

24           So if you look at the lower two figures that are  
25 displayed here, you'll see that the patterns of drift

1 occur shortly after nightfall, at dusk; and then also just  
2 before dawn there appears to be another pulse. This is  
3 sort of classic in vertebrate ecology, if you will.

4 Q Now, in a very low flow water year, there is typically  
5 still winter and spring high flow events. Would these  
6 high flow events contribute to food availability during  
7 the low flow summer months?

8 A Yes, they would.

9 Q Is it reasonable to presume that fish in a stretch of  
10 river will consume 100 percent of the available food such  
11 that none of this food can flow downstream?

12 A Not that I'm aware of in any system that I'm familiar  
13 with, no.

14 MR. BERLINER: Can we have the next slide,  
15 please.

16 --o0o--

17 BY MR. BERLINER:

18 Q Dr. Reiser, could you please explain the mechanism as  
19 to how food, that is, macro invertebrates and other  
20 edibles, move downstream?

21 A Sure. This schematic represents the process of drift.  
22 And the focus is on drift distances of invertebrates. And  
23 this information is from published literature.

24 Basically what occurs in the river system - and  
25 there's flow dependencies here, for sure; flow will have

1 an influence - but the organisms tend to -- and I've  
2 characterized this as drift trips, drift trips. So  
3 invertebrates that enter the drift -- the water columns,  
4 there's classifications of invertebrates. Some of them  
5 are swimmers. They can actually -- they're mobile and  
6 they can move either upstream or downstream. Some of them  
7 are more non-swimmers.

8 But, anyway, they enter the drift and they'll  
9 drift downstream upwards of four to six meters, up to ten  
10 to twenty meters. The mechanism then - picture the  
11 24-hour period and the nighttime period that I was  
12 alluding to earlier - is that a single drift trip can  
13 occur over that amount of distance, but you can see that  
14 these organisms will drift and they repeat that drift trip  
15 cycle. So that over time, you know, you can get  
16 substantial movement of organisms from one location fairly  
17 distal upstream to downstream locations.

18 MR. BERLINER: Could you show the next slide,  
19 please?

20 --o0o--

21 BY MR. BERLINER:

22 Q Dr. Reiser, this slide is a little bit more complex  
23 than the prior one. Could you please explain the  
24 significance of this slide?

25 A Well, this again is somewhat of a cartoon, but it

1 serves to illustrate an important element; and, that is,  
2 it's not only drift that is responsible for invertebrates  
3 being in one location in the space and time. It's  
4 certainly an important part and studies have shown that it  
5 probably is the major element behind that. But you also  
6 have organisms -- some organisms that can actually move  
7 upstream, as illustrated in this cartoon.

8           You actually have organisms that are moving -  
9 again, this would be like a drift trip coming down - so  
10 you've got other organisms coming out of drift into the  
11 location. And let's for example purposes picture this as  
12 a section of the Big Sur River, sort of a segment of it in  
13 the lower portion. You also have invertebrates coming in,  
14 You have adults leaving, and you also have drift coming  
15 in. You have adult insects falling out and dropping on to  
16 the surface as food source.

17           There's also a zone, what's called hyper-react  
18 zone, that extends under the water column and under the  
19 surface of the stream and laterally into the margins that  
20 also has been shown to contribute invertebrate drift. So  
21 the importance of this is -- you know, drift is important,  
22 but there's other sources of invertebrates at play.

23 Q    Now, in your prior slide you indicated that these bugs  
24 can move a number of kilometers. So, for example, if  
25 there were macro invertebrates in the stream, let's say, a

1 mile up from the ranch reach of the river, is it  
2 reasonable that some portion of that food will eventually  
3 find its way down to the ranch reach?

4 A I believe it is, yes.

5 Q Thank you.

6 Let's switch subjects and talk about wetted  
7 perimeter.

8 HEARING OFFICER DODUC: Mr. Berliner, how much  
9 additional time do you think you'll need?

10 MR. BERLINER: Fifteen minutes.

11 HEARING OFFICER DODUC: Okay. As long as we keep  
12 moving.

13 MR. BERLINER: We'll keep it moving. Thank you.

14 BY MR. BERLINER.

15 Q Dr. Reiser, were you requested to do a review of Dr.  
16 Titus' wetted perimeter analysis?

17 A Yes.

18 Q Are you familiar with the wetted perimeter analysis?

19 A I am, yes.

20 Q Have you performed wetted perimeter analyses?

21 A I have, yes.

22 Q Is a wetted perimeter analysis on the Big Sur River in  
23 the ranch reach complicated by the fact that it's a  
24 tidally influenced area?

25 A I believe in that particular location the answer is

1 yes. I think that if you're talking about a section of  
2 stream that does receive tidal influence and you place  
3 transects or cross-sectional areas and you're attempting  
4 to establish a wetted perimeter versus flow relationship,  
5 the tides can actually influence the amount of wetted  
6 perimeter that you might have regardless of the flow  
7 condition that you might have in the surface waters at the  
8 time. So, yes, it can be problematic.

9 MR. BERLINER: Mr. Lindsay if I could have the  
10 next slide, please.

11 --o0o--

12 BY MR. BERLINER:

13 Q Dr. Reiser, were you asked to review the Department of  
14 Fish and Game report and its conclusions as well as the  
15 supporting field data that was collected by Dr. Titus in  
16 the 1990s?

17 A Yes.

18 Q And were you also asked to review the electronic data  
19 that was provided to us by the Department of Fish and Game  
20 that was on an Excel file?

21 A Yes.

22 Q Dr. Reiser, I have provided you with a copy of the  
23 Excel spreadsheet that at the bottom says,  
24 "Dr. Titus/CDFG - Wetted Perimeter Data." Is that the  
25 Excel data that you reviewed?

1 A It appears to be, yes.

2 MR. BERLINER: I'd like this marked for  
3 identification next in order for El Sur Ranch, please.  
4 This would be after the CV.

5 HEARING OFFICER DODUC: Let us find it first.

6 STAFF GEOLOGIST MURPHEY: So the CV would be 50  
7 and this one would be 51, correct?

8 MR. BERLINER: CV would be 51 and this would be  
9 52.

10 STAFF GEOLOGIST MURPHEY: Which was one was 50  
11 then? I'm missing --

12 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
13 I think the CV is 50.

14 MR. BERLINER: Oh, I'm sorry. The first would  
15 have been the CV.

16 STAFF GEOLOGIST MURPHEY: Okay.

17 MR. BERLINER: The second would be the Excel  
18 spreadsheet.

19 STAFF GEOLOGIST MURPHEY: Okay. So the CV will  
20 be 50, Excel spreadsheet 51.

21 MR. BERLINER: Okay. And for convenience, why  
22 don't we make the PowerPoint 52.

23 STAFF GEOLOGIST MURPHEY: Okay.

24 (Whereupon the above-referenced documents were  
25 marked ESR-50, 51, 52 respectively.)

1 By MR. BERLINER:

2 Q Dr. Reiser, do you agree with Dr. Titus' conclusions  
3 regarding his wetted perimeter analysis?

4 A No, I don't.

5 MR. BERLINER: Can we have the next slide,  
6 please.

7 --o0o--

8 BY MR. BERLINER:

9 Q Were you requested to evaluate Dr. Titus' data, the  
10 methods used in the report, and determine whether they  
11 were reliable or appropriately used and support the  
12 conclusion reached concerning the interim flow needs on  
13 the Big Sur River?

14 A Yes, I was.

15 MR. BERLINER: Next slide, please.

16 --o0o--

17 BY MR. BERLINER:

18 Q What were your conclusions?

19 A Well, my conclusions were twofold -- two major  
20 conclusions.

21 The first conclusion was my review of the data,  
22 which included the field notes -- in particular, the field  
23 notes -- indicated that the data were reliable and are  
24 reliable for habitat characterization purposes, that is,  
25 general habitat characteristics associated with what

1 appear to be - and it was not provided in the field  
2 notes - associated with fish sampling areas. And so from  
3 that perspective, I think they're reliable for habitat  
4 characterization.

5 But they're not reliable, nor do I believe they  
6 were ever intended to be used, for developing wetted  
7 perimeter versus flow relationships.

8 MR. BERLINER: Next slide, please.

9 --o0o--

10 BY MR. BERLINER:

11 Q And what is the basis for your conclusions?

12 A Well, as I indicated, the field data in particular,  
13 you could tell from the data that were collected that they  
14 weren't specifically being surveyed for wetted perimeter  
15 versus flow analysis.

16 Now, if they were, I would have expected to find  
17 more detailed survey notes. I would have expected to find  
18 cross-sectional measurements, established cross-sections.  
19 I would have expected to find discharge amendments  
20 associated with each of the locations. And I didn't find  
21 any of those. So it was obvious to me that they weren't  
22 specifically collected for that purpose.

23 Now, secondarily, the data collection methods  
24 that were applied then using these data did not conform to  
25 standard procedures that one uses in developing reliable

1 wetted perimeter versus flow relationships.

2 MR. BERLINER: Next slide, please.

3 --o0o--

4 BY MR. BERLINER:

5 Q Could you briefly explain the general method to  
6 determine a wetted perimeter flow relationship?

7 A Yes. There's a number of reference materials out  
8 there. This one happens to allude to Annear, et al.

9 But fundamentally the key thing for a wetted  
10 perimeter analysis, keep in mind, is that you're looking  
11 for establishing a wetted perimeter versus a flow at a  
12 given location, a specific location in that stream. In  
13 order to do that, you need to establish these fixed  
14 cross-sections, fixed points that you're extending and  
15 coming back to repeatedly to get your measurements from in  
16 order to evaluate how wetted perimeter is changing at that  
17 specific location. That's what a wetted perimeter versus  
18 flow relationship is. It's very specific to a certain  
19 location.

20 Q And you referenced a body of work by Annear and  
21 others. Is that the Instream Flows for Riverine Resource  
22 Stewardship?

23 A It is, yes.

24 Q And we've provided a copy of that for the Board. I'd  
25 like that marked next in order.

1           STAFF GEOLOGIST MURPHEY: Okay. That will be  
2 ESR-53.

3           (Whereupon the above-referenced document  
4 was marked ESR-53 for identification.)

5           MR. BERLINER: The next slide, please.

6                               --o0o--

7 BY MR. BERLINER:

8 Q     Again, Dr. Reiser, could you briefly describe what the  
9 wetted perimeter analysis actually looks at?

10 A     Yes. This slide is a cartoon. And if you look very  
11 quickly here, we've outlined what the section of stream is  
12 that constitutes wetted perimeter. It's simply the total  
13 length of the wetted portion of a cross-section boundary.  
14 And the schematic illustrates that as flows increase, that  
15 length of stream, that length of that section of wetted  
16 perimeter increases with flow. This is very specific to a  
17 given location, which is the need for establishing fixed  
18 points that you can get reliable estimates of how wetted  
19 perimeter is changing with the flow.

20           MR. BERLINER: Could you go to the next slide,  
21 please.

22                               --o0o--

23 BY MR. BERLINER:

24 Q     And, Dr. Reiser, is this sort of a simple drawing of  
25 how you might measure the wetted perimeter, the two banks

1 and the bottom of a stream?

2 A It is a simple representation of that, since normal  
3 streams would not have a, you know, flat surface across  
4 the bottom. But it does illustrate that, in essence,  
5 you're summing up the distance of the bottom of the stream  
6 with the two sides that are in contact with the water and  
7 that becomes the wetted perimeter.

8 MR. BERLINER: Could I have the next slide,  
9 please.

10 --o0o--

11 BY MR. BERLINER:

12 Q Are there generally two mechanisms for conducting a  
13 wetted perimeter analysis, an empirical method and a  
14 computer-generated method?

15 A Yes, there are.

16 Q And could you briefly describe those two?

17 A Well, real quickly, the empirical derivation is simply  
18 going out to a stream; establishing a fixed cross-section,  
19 as I mentioned earlier; coming back to that stream  
20 segment, individual transects, and measuring those same  
21 locations at intervals across the stream under a variety  
22 of flow conditions. In other words to empirically develop  
23 reliable wetted perimeter versus flow relationships, you  
24 need sufficient measurements that actually capture the  
25 full range of what that channel is supplying or

1 containing -- potentially containing.

2           So Annear, et al., suggests ten or more flows.  
3 And essentially you just plot wetted perimeter versus flow  
4 based upon the data that you've collected for each  
5 individual transect.

6           The other process is more simplified. It  
7 requires a computer program. But you can get away with  
8 collecting a single set of flow measurements, field  
9 measurements that includes water surface elevation. And  
10 using computer programs, you can develop a stage discharge  
11 relationship from which you can then calculate one of the  
12 methods of being a wetted perimeter and then you can  
13 actually generate it from a computer program of wetted  
14 perimeter versus flow relationship.

15           But, again, that single set of field measurements  
16 needs to be established at fixed cross-sections for a  
17 given location.

18           MR. BERLINER: May I have the next slide, please.

19   --o0o--

20 BY MR. BERLINER:

21 Q    Dr. Reiser, you concluded that Dr. Titus' wetted  
22 perimeter analysis was not reliable. What was the basis  
23 for your conclusions?

24 A    Well, there were several instances where -- well, in  
25 all instances I noted that there were no fixed transects

1 used. This very fundamental piece that I mentioned  
2 earlier about having the ability to go back to the same  
3 location, I found no evidence that there had been any  
4 cross-sections that had been surveyed in that marked these  
5 as fixed transects. So invariably then, the same  
6 locations, you don't have the -- you don't have any  
7 ability to go back to the same exact location. Now,  
8 whether it's plus or minus a couple of feet, that can  
9 still change the resulting wetted perimeter versus flow  
10 relationship.

11           So the point is you need to go back to the same  
12 location. And without having fixed transects or fixed  
13 points, you can't do that. So that was the one item on  
14 the fixed transects.

15           Secondly, if you look -- when we looked at the  
16 field notes, it became apparent that there were different  
17 lengths of stream that were surveyed at different times.  
18 So again -- you know, and yet there was five transects or  
19 five cross-sections that were measured. So again, the  
20 same locations were not sampled each time.

21           And then bringing it all together then, what the  
22 California Department of Fish and Game did is they  
23 included thalweg or the depth -- they took single  
24 measurements of water depth and channel width and they  
25 used those to calculate the surrogate for our wetted

1 perimeter and then they averaged those. They lumped them  
2 together in establishing a wetted perimeter versus flow  
3 relationship for a given location. That is in developing  
4 individual transect-based wetted perimeter flow  
5 relationships.

6 Q You just indicated they took a single thalweg depth.  
7 Mr. Dettman earlier testified when he did his wetted  
8 perimeter he took a measurement every foot or two. And  
9 how many measurements do you recommend?

10 A I think Mr. Dettman's analysis is more correct  
11 certainly than one measurement taken in the middle of a  
12 channel or at the deepest portion of a channel.

13 USGS has standard protocols for measuring a  
14 discharge. But trying to capture the variability in the  
15 channel form is the key element behind that.

16 MR. BERLINER: May I have the next slide, please.

17 --o0o--

18 BY MR. BERLINER:

19 Q You indicated that Dr. Titus had taken measurements at  
20 different locations. Does this diagram set forth an  
21 example of some of the problems that there were with the  
22 measurement that Dr. Titus did?

23 A Yes, it does. What this slide is showing is this  
24 basically pertains to one of the sites. This is Site C7.  
25 And I've included a table here, an inset table that shows

1 the different dates of measurement that were made. In all  
2 cases, there were five transects that were reported in the  
3 field notes and that was a part of the Excel spreadsheet.

4 But if you look at the different dates and the  
5 different flows, you'll see there's different reach  
6 lengths that were surveyed. Now, what that means is that  
7 the transects that were measured on any given date, if the  
8 total reach length or the total length of stream that was  
9 surveyed were not the same, then the transects and the  
10 actual locations that these measurements were made are not  
11 going to overlap between sampling dates.

12 So using this example, October 13th, '92, versus  
13 November 9th, '93, even if we assume that the uppermost  
14 transect, the very first measurement made at that  
15 location, overlaps, you can see that for 1992  
16 measurements, because we were only measuring 92 feet, we  
17 distribute the transects by five, there's no overlap  
18 between the measurements that were taken in that date  
19 versus the measurements that were taken in 1993 and,  
20 likewise, in some of the other dates mentioned here as  
21 well -- or listed here as well.

22 MR. BERLINER: And could I have the next slide,  
23 please.

24 --o0o--

25 BY MR. BERLINER:

1 Q Did you provide us with an example as to the anomalous  
2 results you get when you don't use constant data from one  
3 measurement to the next?

4 A Yes. I indicated that the way Dr. Titus analyzed the  
5 data was to essentially average the five transects for a  
6 given date for each of the different dates, and then they  
7 plotted those average values to generate a wetted  
8 perimeter versus flow point, that then they connected the  
9 dots and generated a wetted perimeter versus flow  
10 relationship.

11 The more proper way of doing that would have been  
12 to have established transects, repeatedly gone to those  
13 locations and measured the same location repeatedly over  
14 the different flow conditions. What I've illustrated here  
15 is that if you take the data that were presented for the  
16 different transects and you actually plot those out at the  
17 different sampling times. You get a series of figures  
18 that have these very anomalous-looking portions of their  
19 relationship, simply portions that do not occur in nature;  
20 that is, you have an increasing wetted perimeter at this  
21 point followed by a decrease in wetted perimeter even  
22 though flows are increasing. You have an increase and  
23 then you may get another decrease. That simply cannot  
24 happen in a normal stream system where you have increasing  
25 wetted perimeter. Always -- or, excuse me -- increasing

1 flows will always result in an increase in wetted  
2 perimeter.

3 Q And so if I understand correctly, as a result of the  
4 methodology that was used, you ended up with a result that  
5 is impossible in nature because an increase in flow will  
6 always increase the measurement that you would be taking?

7 A That's correct. If you plot the transects that were  
8 listed in the field data and in the electronic data files  
9 and keep those paired one to one, two to two, three to  
10 three, over time this is the type of relationship that you  
11 end up with.

12 This is clearly a function of not having fixed  
13 transect locations, as well as having different distances  
14 that were measured at each of the times that they  
15 surveyed.

16 Q And was the result in C7 unique or did this occur at  
17 every measure point?

18 A We plotted these over the next -- there's a series of  
19 slides here that are in -- I think that follow that can  
20 plot --

21 Q Just a second, Dr. Reiser. Mr. Lindsay is occupied at  
22 the moment, so we can't go to the next slide.

23 A Well, the answer is yes.

24 Q Why don't you go ahead and explain.

25 A We plotted these for every site in the similar fashion

1 and found similar types of anomalies occurring in each one  
2 of the sites.

3 MR. BERLINER: Sir, If you could flip through  
4 those just a second or two on each one so the Board  
5 members can see it.

6 HEARING OFFICER DODUC: We have them.

7 MR. BERLINER: Great. Thank you.

8 Let's go to the slide that's entitled "Basis for  
9 Conclusions."

10 --o0o--

11 BY MR. BERLINER:

12 Q Dr. Reiser, if you could please set forth the basis  
13 for your conclusions that Dr. Titus' wetted perimeter  
14 analysis was done improperly?

15 A Well, there's one other element too that is very  
16 notable; and, that is, there was no consistency in the  
17 flow conditions that were measured at the different  
18 locations. And I'll explain why that's significant here  
19 in a second.

20 But basically, if you look at the data and you  
21 look at the information, if there are five locations that  
22 included a low flow measurement as part of the data set  
23 that went into determining the wetted perimeter versus  
24 flow relationship, and there were five locations where it  
25 did not include that low flow measurement, and because

1 the -- because Dr. Titus essentially forced the zero point  
2 of zero flow through the origin, in other words wetted  
3 perimeter is zero at zero flow, your inflection points.  
4 The ones that are used in setting the particular flows are  
5 largely determined by the lowest flow of its measure,  
6 especially if you're doing this in sort of an empirical  
7 fashion where you're going out and collecting data.

8           This example here, this is actually a figure from  
9 Dr. Titus' report, Figure 4, that will illustrate this.

10 Q   Just for the record, this is DFG-22, Figure 4.

11 A   In this figure, if you look at the top figure, you'll  
12 see that the inflection point, the sharpest point here, a  
13 drop occurred at a low flow, somewhere around 5 or 6 cfs.  
14 So that's C9 I guess is the site.

15           If you compare that C9 with, for example, M23, is  
16 a good example, and that particular data set the very  
17 first flow that's reported is over at about 10 cfs. There  
18 were no measurements made at 5 cfs. Had measurements been  
19 made at around 5 cfs, I would expect this -- you know,  
20 using the same process that was applied, I would expect  
21 this curve to very closely mirror what's occurring up at  
22 C9. So that lowest flow measurement really does have a  
23 dramatic influence on that inflection point that you see.

24           Had you measured under C9, for example, if you  
25 had measured under 3 cfs, it's possible that that line

1 could have even extended over a little bit farther before  
2 you get an inflection.

3 Q So in other words, what Dr. Titus had identified on  
4 M23 as his first break point might in fact be a second or  
5 a third break; is that correct?

6 A That's possible, yes.

7 MR. BERLINER: We can go to the next slide.

8 --o0o--

9 BY MR. BERLINER:

10 Q And you provided an example as to how measuring at  
11 different flows could have an effect on your break points?

12 A Yes. In this slide, what I've done is I've taken the  
13 five sites - and this basically are using the data sets  
14 that Dr. Titus displayed - and I've segregated the five  
15 sites for which there was a low flow measure made and I've  
16 normalized the data. By that, I mean, I've considered the  
17 wetted perimeter values and I simply translated those into  
18 a percent of maximum wetted perimeter for each of the  
19 relationships that Dr. Titus developed. And I plotted  
20 those on this figure. And then superimposed upon that we  
21 calculated a median value of those five different  
22 relationships just for illustrative purposes.

23 And the interesting thing -- I did this for both  
24 the sites that were visited under low flow conditions and  
25 then I have a subsequent slide that we'll show this

1 under -- for the four sites or five sites for which there  
2 wasn't a low flow measurement. And I guess -- you know,  
3 here's the slide that was not visited under low flow  
4 conditions.

5           If we could go back quickly to the first slide.  
6 And the red lines that we have outlined here simply  
7 pinpoint different areas' percentages. This is just for  
8 comparative purposes to give you an idea of how sensitive  
9 that low flow measurement is.

10           For example, if you take the 80 percent of  
11 maximum wetted perimeter value, come over to the median  
12 line and drop that down, you see that 5.5 cfs using these  
13 five data sets here translates to 80 percent of the  
14 maximum wetted perimeter.

15           If you contrast that with -- if you could go to  
16 the next slide -- with the sites that were not visited,  
17 that same 80 percent value now comes over and it indicates  
18 that 13.4 cfs.

19           So it's very much illustrative of the sensitivity  
20 of well defining those low flow points so that you get an  
21 accurate representation of wetted perimeter versus flow  
22 relationship.

23           MR. BERLINER: Go to the last slide, please.

24   --o0o--

25 BY MR. BERLINER:

1 Q So what is your take away from this, Dr. Reiser?

2 A Well, again, I think the data that were displayed that  
3 we reviewed are reliable data. I think they're reliable  
4 for the purposes of habitat characterization.

5 But, again, my review, for the reasons and the  
6 conclusions that I just described, indicate that the data  
7 are not reliable for deriving accurate wetted perimeter  
8 flow relationship.

9 Q Now, Dr. Titus used a first break point and then a  
10 second break point. Under what circumstance would you use  
11 a break point other than the standard initial break point?

12 A If the wetted perimeter versus flow relationship  
13 showed several, what I would consider, dramatic changes,  
14 in other words you have a first inflection point and then  
15 a little ways further there might be another very sharp  
16 increase in wetted perimeter and then a plateau, I would  
17 consider, you know, at least considering that or  
18 evaluating that. But if you have very subtle changes in  
19 it that really are not defining well defined second  
20 inflection points, then I wouldn't consider those.

21 Q And when we put up the Fish and Game exhibit earlier  
22 where Dr. Titus had identified two break points, are  
23 those -- would you characterize those as dramatic break  
24 points or substantial break points or subtle break points?

25 A Subtle.

1 Q Did you prepare a technical memorandum that summarizes  
2 your or compiles your testimony today?

3 A I did, yes.

4 MR. BERLINER: That's been provided to the Board.  
5 I would like to move that into evidence as our last item  
6 today.

7 HEARING OFFICER DODUC: We'll designate it as  
8 ESR --

9 MR. BERLINER: -- 54.

10 STAFF GEOLOGIST MURPHEY: Yes, that one is 54.  
11 (Whereupon the above-referenced document  
12 was marked ESR-54 for identification.)

13 HEARING OFFICER DODUC: We won't move it yet into  
14 evidence.

15 Does that complete your rebuttal direct?

16 MR. BERLINER: Yes.

17 HEARING OFFICER DODUC: Okay. Let's start with  
18 cross.

19 Department of Fish and Game.

20 Ms. Ferrari, let's see if we can -- let's shoot  
21 for 30 minutes.

22 MS. FERRARI: Mr. Takei is actually going to be  
23 doing cross. I'm going to do the first witness.

24 My questions are going to be for Mr. Harvey.

25 MS. GOLDSMITH: Dr. Harvey.

1 MS. FERRARI: Excuse me. Dr. Harvey.

2 CROSS-EXAMINATION

3 BY MS. FERRARI:

4 Q You noted in your testimony that at what you refer to  
5 as steady state the groundwater aquifer is in balance,  
6 essentially the inflows are equal to the outflows; is that  
7 correct?

8 A Yes.

9 Q Can you just rehash for me what the sources of water  
10 for the aquifer are?

11 A With or without the pumping?

12 Q Without pumping.

13 A Okay. Without pumping, the -- well, the fundamental  
14 sources of course are precipitation. But if we look at  
15 this figure where I isolated the zone of influence for the  
16 wells, then the source is inflow of groundwater from  
17 outside of the zone of influence and potentially river  
18 recharge of the aquifer.

19 Q To your knowledge is the river in good hydraulic  
20 connection with the aquifer?

21 A There does appear to be a zone called a culmation zone  
22 that has lower permeability but it's saturated throughout.  
23 And then there's flow between the river and the aquifer.

24 Q So that's fairly good?

25 A Good or bad, there is flow between the river and the

1 aquifer.

2 Q What is the storage volume of the aquifer around El  
3 Sur Ranch's wells? Are you aware of that number?

4 A You mean the total volume of floor space that's  
5 contained in groundwater.

6 Q Yeah.

7 MR. BERLINER: I'm going to object as being vague  
8 by what you mean around the El Sur Ranch wells. That is  
9 not a defined area.

10 HEARING OFFICER DODUC: Please restate, Ms.  
11 Ferrari.

12 BY MS. FERRARI:

13 Q Do you know what the storage volume is of the whole  
14 aquifer?

15 A No.

16 Q Okay. Do you happen to have an estimate at all?

17 A Not offhand.

18 Q Okay. I imagine that when you were going through the  
19 reports, you came across a number from Jones & Stokes that  
20 estimated the storage volume of being around 765  
21 acre-feet?

22 A That sounds right.

23 Q Okay. So then with the pumping you switch to a new  
24 steady state essentially where you've got the Q equal to  
25 change in river plus the change in discharge, which I

1 believe is the next -- oh, new steady state. So in this  
2 new steady state does water that is pumped from the wells,  
3 does it come from the river?

4 A Yes. Some of it certainly does. And I should clarify  
5 it's both drawing river from the river and decreasing  
6 discharge to the river. It has the same net effect on the  
7 river.

8 Q But the discharge that it's taking from would have  
9 ended up in the river?

10 A That's right.

11 Q Okay. Now, El Sur Ranch says about 30 percent of  
12 their diversion amount comes from the river. Do you agree  
13 with that number?

14 A Well, from measurements upstream of the temporary  
15 gage, which is the VT-2 gage, it seemed like a reasonable  
16 value for that reach in the river.

17 Q So for that reach of the river. But it could be  
18 different for other reaches of the river?

19 A Certainly would be, yeah.

20 Q So in your opinion then, the rest of the pumped water  
21 would be coming from aquifer storage?

22 A Initially, but not when you're at a steady state.

23 Q Okay. And at a steady state -- well, initially it's  
24 coming from a storage but eventually the storage water  
25 runs out?

1 A It's not that it runs out. It's that the increased  
2 flow into the aquifer and essentially decreased flow out  
3 of it, rise is equal to pumping rate. So you cease to  
4 take water out of storage. You haven't depleted all of  
5 the water out of the aquifer.

6 Q So you're saying there would still be water in the  
7 storage in the alluvial aquifer even though you're taking  
8 it -- but you're not taking that water necessarily because  
9 you're taking it from the water that would be discharging  
10 into the ocean, is what that what you're saying?

11 A Well, the cone of depression doesn't hit the bottom of  
12 the aquifer. You don't fill all the parts with air. So  
13 there is still water potentially available to, say, if you  
14 were to pump more. But you stop taking water out of  
15 storage because you've changed the gradients enough that  
16 you're withdrawing enough water from the river or  
17 decreasing enough discharge to the river or decreasing  
18 enough discharge directly to the ocean, such that all of  
19 those changes now equal the pumping rate.

20 Q Okay. So maybe we should talk about the change in  
21 discharge number that you've got up there then.

22 Mr. Horton, and through SGI, has said that  
23 pumping doesn't cause saline intrusion essentially. Do  
24 you agree with this?

25 MS. GOLDSMITH: Objection. I believe that

1 mischaracterizes Mr. Horton's testimony. It does not  
2 cause saline intrusion to the well.

3 HEARING OFFICER DODUC: Revise your question, Ms.  
4 Ferrari.

5 BY MS. FERRARI:

6 Q Does the pumping at El Sur Ranch's -- or does the  
7 pumping at El Sur Ranch's wells have the ability to draw  
8 saline water into the aquifer?

9 A When pumping lowers the heads -- the water level in  
10 the aquifer, so it must draw some saline water to the  
11 aquifer.

12 Q So if it's drawing a substantial amount of saline  
13 water into the aquifer, wouldn't you expect that at that  
14 point the old well would have to stop pumping, which it  
15 has I believe?

16 MR. BERLINER: I'll object to the question as  
17 being vague. I don't know what "substantial" means.

18 BY MS. FERRARI:

19 Q Okay. The old well has stopped pumping before when  
20 saline goes up to a certain amount; correct?

21 A Yes.

22 Q Okay. But the new well has not been impacted by  
23 saline water; correct?

24 A I believe that's correct.

25 Q Okay. So presumably then when the new well is pumping

1 during the irrigation season, it's not pulling up water  
2 from the ocean -- that would discharge to the ocean -- or  
3 not pulling up saline water from the ocean?

4 A Not actually into the well.

5 Q Not actually into the well. Okay.

6 So in that case then, where would the water be  
7 coming from that the new well is pumping?

8 A Well, it's the same as the old well. It's coming from  
9 a variety of sources. Decreased flow in the river or the  
10 decreased discharge to the ocean.

11 Q But if you're decreasing the discharge to the ocean,  
12 isn't that a factor that allows saline water to come  
13 further inland?

14 A Yes, it has to come a bit further inland. How far, I  
15 don't know. And there's no evidence that it reaches in  
16 the screens of the new well.

17 Q Right. So there's no evidence that it reaches the new  
18 well. And there also hasn't been an estimate of the  
19 amount of discharge that enters the ocean; correct?

20 A Corrects.

21 Q So you don't really know how much water is being taken  
22 from that discharge?

23 A Yes.

24 Q Okay. And we do know that the new well never has to  
25 stop pumping because of saline water intrusion?

1 A As far as we know, yes.

2 Q So would it be possible then -- oh, so -- let's go  
3 back to the alluvial storage just briefly.

4 You had said that the pumping can never deplete  
5 all of the storage; correct?

6 A Yeah. By storage, I think you just mean all of the  
7 groundwater.

8 Q In the alluvium.

9 A In the alluvium.

10 Q Right.

11 A That's right. You're never going to pump all of the  
12 water out of the alluvium.

13 Q And do you know that because you believe the storage  
14 in the aquifer to be large enough?

15 A Well, there's just some practical things here.  
16 Once -- if the water table were to fall below the bottom  
17 of the well, then the well doesn't work any more. But  
18 there would still be water below the bottom of the well.

19 Q So there must be enough water coming in somewhere to  
20 ensure that the pumping -- that water is feeding the  
21 pumping demand and the water table is not lowering?

22 A Yes.

23 Q Okay. And you have said before that the amount coming  
24 down through transect AA, that inflow amount is steady,  
25 it's constant?

1 A Actually I'm not quite sure where AA is.

2 Q Oh, I'm sorry. I believe that is your "I" number up  
3 there, the inflow that's coming from --

4 A Yeah, above the zone of influence.

5 Q Above the zone of influence. And I believe --

6 A I'm not prepared to say exactly where that is.

7 Q But that number is constant?

8 A Outside of the zone of influence it's -- yeah, uh-huh.

9 Q So if you needed -- if you're looking -- if the  
10 pumping demands was needing water, it wouldn't be getting  
11 it from additional inflow through that mechanism or  
12 through that location?

13 A That's right.

14 Q Okay. So is it possible then that the river water  
15 outside of the zone of influence provides some of the  
16 water?

17 A Not because of pumping. I mean it's a little hard to  
18 say where the origin of the groundwater flowing in to the  
19 zone of influence storage is. I think it's irrelevant  
20 actually.

21 Q But essentially when you're pumping, you're creating  
22 the gap in the aquifer somewhere. And the water -- water  
23 comes from somewhere to refill that gap?

24 A That's right.

25 Q And it's possible that the water that's coming in to

1 refill that gap is water that has left the river somewhere  
2 upstream to fill the aquifer; that's possible?

3 A Yes.

4 Q Okay. You had discussed briefly Mr. Custis' residual  
5 loss model. Do you believe that residual losses occur to  
6 a river as a result of pumping?

7 A Yes, well, what you're just asking about. But I don't  
8 think it significantly extends beyond the zone of  
9 influence.

10 Q But it could extend beyond the zone of influence?

11 A Not in any significant way. Within the zone of  
12 influence --

13 Q I'm sorry. But it can extend beyond the zone of  
14 influence. You're saying you don't think it would be  
15 significant, but it can?

16 A Yeah, we're getting into this language. What I mean  
17 by zone of influence is the zone that's influenced by  
18 pumping. So if you're beyond it, then no.

19 Q Okay.

20 A Yeah.

21 Q So back to my question. Do you believe residual  
22 losses occur to a river -- or that occur from a result of  
23 pumping -- residual losses to a river occur from a result  
24 of pumping?

25 A Yes, when the cone of depression from pumping

1 rebounds, it's filling part with the river water.

2 Q Do you believe that the concept of residual losses was  
3 addressed by El Sur Ranch in their reports?

4 A I hesitate to answer that because I'm not quite sure  
5 what we're talking about, residual losses. There was a  
6 couple issues that -- sort of different things that have  
7 been labeled that way.

8 Q I would characterize it then as the losses that occur  
9 to a river, that continue to occur to the river even after  
10 pumping has stopped.

11 A I don't know. I don't recall exactly how that was  
12 addressed.

13 Q Okay. I thought you had said this -- and please  
14 correct me if I'm wrong here -- but I thought you had said  
15 that the losses to a river continue for about the same  
16 amount of time as pumping.

17 A No. They continue for about the same amount of time  
18 as it took the water table to reach a stable  
19 configuration. So that the pumping could have gone on  
20 longer than that.

21 Q The pumping could have gone on longer without losses  
22 continuing from the river?

23 A No. So say you pump for a month. When you first  
24 start pumping the water is going through storage. And  
25 then it may take a couple weeks perhaps until water is no

1 longer coming from storage. Okay? And then after that,  
2 you're in a stable situation. Now, if you stop pumping,  
3 it will take about the same amount of time until the  
4 residual effects cease. So the cone of depression goes  
5 away in about two weeks. So it takes about two weeks of  
6 pumping to creating it.

7 Q So in a situation, let's say, I would say -- let's say  
8 that El Sur Ranch operates throughout all of June and all  
9 of July and most of August and then stops for five days  
10 and then begins a pumping test. In that situation, would  
11 all of the residual losses to the river that would have  
12 occurred from all of the previous pumping have stopped at  
13 the time of the pump test?

14 A Probably not in five days.

15 Q Probably not five days. Okay.

16 Thank you.

17 HEARING OFFICER DODUC: Mr. Takei.

18 MR. TAKEI: Yeah, my name is Kevin Takei, staff  
19 counsel for the Department of Fish and Game. I have a  
20 couple of questions for Dr. Reiser.

21 CROSS-EXAMINATION

22 BY MR. TAKEI:

23 Q Starting with the wetted perimeter report. On page 8  
24 of the wetted perimeter report, specifically DFG-T-22  
25 there's a section titled Data Quality. Are you familiar

1 with this section or -- can I assume that if you've read  
2 the entire wetted perimeter report, that you've reviewed  
3 that section?

4 A I've read the report. I don't recall that particular  
5 section precisely.

6 Q Well, to paraphrase I guess that section in some  
7 respects, it essentially states that the similarity in  
8 wetted perimeter measures with similar flows on different  
9 dates essentially demonstrates a high degree of  
10 repeatability ability among the results. Would you  
11 disagree with that statement?

12 A I don't know. I don't have an opinion on that  
13 particular point. You're asking me about repeatability,  
14 and I'm not sure -- I really don't have an opinion.

15 Q Okay. But you don't have any specific criticism over  
16 the Data Quality section, is that safe to assume? I  
17 didn't see it in your testimony -- other testimony.

18 A Well, in terms of the data quality - I think I  
19 mentioned this - that for what the data were and what I  
20 assumed their intended purpose was, I thought they were  
21 reliable data. But for application to derivation of  
22 wetted perimeter versus flow, I do not consider them to be  
23 reliable.

24 Q Okay. Now, correct me if I'm wrong or if I misstate  
25 you. Is it safe to say that you place a strong emphasis

1 on having a fixed location under -- the wetted perimeter?

2 A Yes.

3 Q And you understand that the goal of Fish and Game's  
4 wetted perimeter analysis was to develop a minimum bypass  
5 flow recommendation on a river reach scale as opposed to  
6 fixed points on the river?

7 A I understand that was the objective, yes.

8 Q And would you agree that using a wetted perimeter data  
9 from replicated habitat units spanning a river reach  
10 provides a more accurate representation of the river reach  
11 than just using a single point?

12 A Not if the data fundamentally are not intended for  
13 developing wetted perimeter versus flow relationships. I  
14 think there would be a high degree of variability there,  
15 that I demonstrated in some of my exhibits that illustrate  
16 that if you're taking information across space and  
17 blending that together, that you're going to get wetted  
18 perimeter versus flow relationships that are unreliable.

19 Q Right. But back to the question. Regardless of your  
20 concern about the data itself, would you agree though that  
21 using the wetted perimeter data over several habitat units  
22 spanning the river reach provides a more accurate  
23 representation of the wetted perimeter for the entire  
24 river reach as opposed to a fixed point?

25 MR. BERLINER: Could you clarify what you mean by

1 "as opposed to a fixed point"?

2 MR. TAKEI: Well, Dr. Reiser put a lot of  
3 emphasis on having a fixed point. And my point is that  
4 we've looked at this wetted perimeter report for purposes  
5 of having a bypass flow and incorporating the entire flow  
6 of the river reach, not necessarily a specific point on  
7 the river. And so I just wanted to get the doctor's  
8 thoughts on taking data throughout the habitat -- various  
9 habitat units.

10 HEARING OFFICER DODUC: Do you have an objection,  
11 Mr. Berliner?

12 MR. BERLINER: Yeah, I have an objection because  
13 I think we're mixing apples and oranges.

14 HEARING OFFICER DODUC: Actually, I don't think  
15 your microphone is on.

16 MR. BERLINER: I have an objection, that I think  
17 we're talking about two different things here. Dr.  
18 Reiser's testimony indicated that when you conduct a  
19 wetted perimeter analysis of a transect, you need to start  
20 with a fixed point, a single spot in the ground so you can  
21 come to repeatedly, as opposed to different transects of  
22 the river or different reaches of the river. And so we're  
23 talking about two entirely different things here.

24 HEARING OFFICER DODUC: Mr. Takei, do you wish to  
25 rephrase your question?

1 BY MR. TAKEI:

2 Q If you're trying to identify the bypass over the  
3 habitat that spans a distance, what sort of data would you  
4 have to collect for that? Transects all along the points.

5 A I think I understand your question. And  
6 fundamentally, if you're looking at a reach of stream and  
7 you're looking at establishing some type of a flow regime  
8 within any given hypothetical section of stream, having  
9 multiple transects within there for consideration of that  
10 rather than relying on a single transect, I would agree.  
11 That's an appropriate thing to do.

12 However, how you collect the data at those  
13 individual transects and how you use the data then is the  
14 key to this discussion. If one were to go in and  
15 establish transects, and they were actually truly  
16 transects where you had headpins on both sides of the  
17 river, and you went back repeatedly to those same  
18 locations and established wetted perimeter versus flow  
19 relationships that were accurately defined, then you  
20 looked at how those different wetted perimeter versus flow  
21 relationships compared throughout a reach if you had  
22 individual transect location throughout that reach that  
23 were collected in that fashion, I would say that's an  
24 appropriate thing to consider, yes. But that's not how  
25 the data were collected.

1 Q Well, the data did look at different points within the  
2 habitat units and then it also included multiple habitat  
3 units. Do you agree?

4 A Yes, I do agree.

5 Q So then to develop a figure or a bypass flow as was  
6 done in the report, they took multiple points in a single  
7 habitat unit to create an average, so to speak, of that  
8 habitat unit. And would you disagree with that approach?

9 A I do disagree with that approach, yes.

10 Q And that was because of the your concern regarding the  
11 fixed point?

12 A Correct. You're mixing data. It is an  
13 apples-and-oranges argument here. And, that is, you have  
14 different locations. If we go back to the transect  
15 display that I was showing where there were measurements  
16 taken in 1992 and there were transects that were measured  
17 in 1993, I believe, and there was a wide disparity between  
18 the locations of those points. You really are looking at  
19 populations of information across that stream that for the  
20 first figure that's distinctly different from the  
21 population of information from the remaining five  
22 transects.

23 Actually I think it's a couple back from that.

24 --o0o--

25 DR. REISER: So what you have is you have

1 information that's collected from these five transects  
2 that are defining these locations, these various specific  
3 locations.

4 MR. BERLINER: For the record, Dr. Reiser is  
5 pointing to the transects marked five, four that are in  
6 red. And, Dr. Reiser, just as you go through this with  
7 your PowerPoint, you need to describe what you're pointing  
8 to. Otherwise the record will be incomplete.

9 DR. REISER: Yes, the figure that I'm pointing to  
10 shows the schematic of the 1992 transect distribution,  
11 which were marked in red, and then as compared with the  
12 1993 distribution. And basically what you're seeing is  
13 data's being collected at different locations in the  
14 stream. Now, each one of those locations has a very  
15 distinct wetted perimeter versus flow relationship. And  
16 you have apples in the red and you have oranges in the  
17 green. So they're very different populations of  
18 information, if you will. Populations of thalwegs and  
19 populations of channel widths. The schematic illustrates  
20 this. And this is a schematic, but you've got a certain  
21 width of stream here and you've got a narrower section of  
22 stream here. And yet the analysis that was done blended  
23 all of these different points together.

24 BY MR. TAKEI:

25 Q But wouldn't a random systematic selection of transect

1 locations for determining an average wetted perimeter  
2 condition preclude a need for using those fixed points?

3 A I don't believe it would, no.

4 Q Why not?

5 A You're still fundamentally defining wetted perimeter  
6 versus flow relations. If you wanted to use a random  
7 selection process to select a transect --

8 Q For creating an average wetted perimeter condition.

9 A I don't think that that would be appropriate. If you  
10 wanted to use randomization for selecting a transect  
11 location, that's one thing. But using random -- I'm not  
12 sure that there was a random process used in this analysis  
13 anyway.

14 Q Well, I think I used that term so -- I mean along the  
15 lines that you're talking about, the fixed point, as you  
16 pointed out. They have to return to the same point.

17 But the point I was trying to make and you  
18 answered, I thought - but please correct me if your answer  
19 changes though - to try to develop an average wetted  
20 perimeter over this area, why isn't it suitable to take  
21 the data from these ten transects, create an average based  
22 on that rather --

23 A Because fundamentally you're developing -- you're  
24 developing your whole analysis around blending of these  
25 different points together rather than actually defining --

1 well defining wetted perimeter versus flow relationships  
2 for each of the transect locations. So you're just simply  
3 unable to develop a reliable relationship using the  
4 process you just described.

5 Q So that average would be unreliable, you're saying?

6 A I believe it would be, yes.

7 Q Okay. Is it safe to assume though that you would be  
8 uncomfortable using a single wetted perimeter transect to  
9 develop a minimum bypass flow recommendation for the  
10 entire river reach like the Big Sur?

11 A Yes. I would be uncomfortable with a single transect  
12 defining the entire river system, yes.

13 Q Okay. And I think in your testimony you identified  
14 some issues regarding the break point or inflection points  
15 on the Department's wetted perimeter curves. And I think  
16 your concern was the fact that Fish and Game didn't use  
17 the inflection for -- that Fish and Game was using the  
18 incipient asymptote, basically the second break point  
19 flow. What was your specific concern with that?

20 A I don't recall actually in my testimony discussing the  
21 second inflection point other than what Mr. Berliner was  
22 asking me about when might you look at a second inflection  
23 point. But I don't specifically remember discussing the  
24 incipient asymptote.

25 Q Which we refer to as the second break point?

1 A Yes. In the report, yes, it's mentioned.

2 Q Would you be surprised to learn that a wetted  
3 perimeter discharge relationship, developed for the  
4 ranch's Velocity Transect 1 using data collected by the  
5 ranch's own consultants and including 25 data points,  
6 essentially mimics the bottom line results of Fish and  
7 Game's own wetted perimeter analysis basically that the  
8 incipient asymptote or the second break point is 17 cfs?

9 MR. BERLINER: I'm going to object to this.  
10 There is nothing in evidence about the wetted perimeter  
11 analysis that was done by anybody working for El Sur  
12 Ranch.

13 HEARING OFFICER DODUC: Mr. Takei.

14 BY MR. TAKEI:

15 Q Can I present a hypothetical then to you, Doctor, that  
16 if El Sur's own data -- would it be surprising that if the  
17 ranch's own data provided similar flow recommendations as  
18 that of Fish and Game's wetted perimeter report?

19 MR. BERLINER: I'm going to object. That  
20 question's vague and assumes facts not in evidence.

21 HEARING OFFICER DODUC: I concur.

22 MR. TAKEI: Could I have few more minutes? I  
23 have a couple of questions regarding food.

24 HEARING OFFICER DODUC: Go ahead, Mr. Takei.

25 BY MR. TAKEI:

1 Q I just want to clarify one of the exhibits. And I  
2 think it is marked as ESR-52. It's a PowerPoint slide  
3 entitled "Behavioral Drift."

4 There are two graphs towards the bottom. One is  
5 intentional drift and the other is accidental drift. And  
6 there's a -- I don't remember my mathematics, but the  
7 vertical axis -- I don't know if it's the X or the Y axis.  
8 Are they of the same scale? I guess is what I'm  
9 wondering.

10 A I'm assuming they are. They're basically -- this was  
11 from one of the citations down -- that's listed down  
12 below.

13 Q I just want to make sure I understand. So the --  
14 well, I'm referring to the second -- I guess there's a  
15 graph entitled Intentional Drift. There's the uppermost  
16 point on the left. So would it be safe to assume that  
17 that is saying that it is in fact greater than the points  
18 reflected on the accidental drift graph?

19 A Correct.

20 Q It's just there's no other data point, so I just  
21 wanted to make sure.

22 A That's correct.

23 Q Okay. And is it also safe to assume that the curve on  
24 the intentional drift -- it looks like it begins at about  
25 1800 hours and ends at about 6 a.m. So can I also assume

1 that it is saying that there are no intentional drifts  
2 outside those hours? Or I don't know -- it's an issue of  
3 scale perhaps. But --

4 A You know, this is not based upon any specific data.  
5 You know, I can say that it's based upon -- well, I  
6 shouldn't say. I mean it was based on information, it's  
7 based on a wealth of information. And what this does is  
8 it illustrates the general patterns that one sees, the  
9 relative abundance, if you will, of invertebrate drift.  
10 And all it's intended to show is that, as you end up with  
11 less light, you know, at the time of darkness at dusk,  
12 that's when intentional drift takes off. It's in response  
13 to this escape from predators and searching for food. And  
14 the invertebrates drift and they've accustomed themselves  
15 to avoiding predation. So they tend to drift primarily at  
16 night. And the predominance of that occurs as a pulse, as  
17 a pulse right after nightfall. And then there's typically  
18 a second pulse that can occur just before dawn.

19 Q Right.

20 A Does that answer your question?

21 Q Yes. And I think you said also that -- I understand  
22 what you said about how -- that the purpose of the graph  
23 is to reflect the movement during those hours. But you  
24 also said - and I want to make sure you still agree - that  
25 the purpose is also to show that a comparison between the

1 two graphs, the intentional and the accidental, that the  
2 intentional is greater than the accidental.

3 A That's corrects.

4 Q And you've talked about that the bugs or the food can  
5 travel distances both up and down the stream. And I mean  
6 this of course isn't going to happen if the fish are  
7 eating the bugs.

8 A Right.

9 MR. BERLINER: Objection. That's vague. The  
10 bugs that are eaten are not going to move other than  
11 inside the fish. But we're talking about bugs that aren't  
12 inside the fish.

13 BY MR. TAKEI:

14 Q Well, no, I mean -- we talked about the movement of  
15 the bugs. But I mean -- and it's an obvious point. But I  
16 mean I'm not the scientist, and I just would like the  
17 record to reflect the doctor's statement that in fact  
18 there's no bugs -- the bugs that are eaten in the fish are  
19 not going to be moving up and down the stream on their own  
20 volition, I should say perhaps?

21 A No, I would say that the bugs will continue to move  
22 downstream as drift on a continuous basis during certain  
23 times of the day and certain times of the year in spite of  
24 certain amounts of them being consumed. So there's going  
25 to be -- there will be predation. You know, the steelhead

1 will pick up the invertebrates, they will consume a number  
2 of the organisms. But there will be more that will be  
3 coming down from the drift, and there will be other  
4 sources that will be supplied in the invertebrate area  
5 within that area -- within those locations.

6 Q And you're aware that steelhead stop growing in the  
7 summer months during the low flow periods on the Big Sur  
8 River?

9 MR. BERLINER: Objection. That misstates the  
10 evidence. There's no evidence that steelhead stop  
11 growing.

12 HEARING OFFICER DODUC: Restate, Mr. Takei.

13 BY MR. TAKEI:

14 Q The Fish and Game has expressed some opinions. And  
15 are you aware that -- I believe Fish and Game had  
16 expressed some testimony during this hearing in Mr. Titus'  
17 testimony that the steelhead in general stopped growing  
18 during the summer months, during the low flow periods.  
19 Are you familiar with Mr. Titus' testimony?

20 MR. BERLINER: Objection. That misstates the  
21 testimony.

22 MR. TAKEI: I believe that --

23 HEARING OFFICER DODUC: Direct us to where in Mr.  
24 Titus' testimony, Mr. Takei, you are referring to.

25 MR. TAKEI: Your Honor, let me move on. That's

1 fine.

2 HEARING OFFICER DODUC: All right.

3 BY MR. TAKEI:

4 Q Would a starving steelhead fish let food that is  
5 approaching it pass by, or would it be inclined to eat the  
6 food?

7 A If I was that steelhead, I would eat the food, that's  
8 for sure.

9 Q So under low flow conditions, if food was limited,  
10 isn't it unlikely that there would be excess food or food  
11 drifting downstream or perhaps upstream of steelhead?

12 MR. BERLINER: Objection. Can you rephrase that  
13 question?

14 MR. TAKEI: Sure.

15 BY MR. TAKEI:

16 Q So under low flow conditions when food is limited,  
17 isn't it -- I'm repeating myself.

18 So it's stated that the hungry fish is going to  
19 eat the food, right?

20 A Okay.

21 Q So if there's low flow conditions and little food is  
22 flowing down, isn't it unlikely that food is going to be  
23 passing by that fish?

24 MR. BERLINER: Objection. What do you mean by  
25 little food?

1           MR. TAKEI: Small quantities. If no food,  
2 perhaps there's insects that we've been referring to would  
3 be passing by the fish -- the steelhead.

4           MR. BERLINER: This is a hypothetical?

5           MR. TAKEI: Yes.

6           MR. BERLINER: And I'm going to maintain my  
7 objection. Are you talking about one bug passing a fish  
8 or are you talking about a river with one fish and bugs in  
9 it? It's just a vague question.

10          MR. TAKEI: Okay.

11          MR. BERLINER: I don't have a problem with  
12 whether -- if you can just restate it.

13 BY MR. TAKEI:

14 Q       If you have one hungry fish, one hungry steelhead, and  
15 you have low flow conditions - and I don't know how much  
16 food would be available, bugs - the food for the fish  
17 would be available. But let's just say, I don't know,  
18 three bugs. Is it likely or is it -- how likely would it  
19 be that those bugs would -- three bugs would pass by a  
20 hungry steelhead fish?

21          MR. BERLINER: Well --

22          HEARING OFFICER DODUC: Mr. Berliner, do you have  
23 an objection?

24          MR. BERLINER: I have an objection. I'm okay  
25 with a hypothetical that's grounded in some basis of

1 reality. But I don't think this one is.

2 HEARING OFFICER DODUC: Mr. Takei, let's help  
3 each other out. It's getting late.

4 MR. TAKEI: Yeah, I agree.

5 HEARING OFFICER DODUC: What is it that you are  
6 trying to demonstrate with your questions? Talk to me.

7 MR. TAKEI: Well, so I mean -- Dr. Reiser talked  
8 about the food --

9 HEARING OFFICER DODUC: Whether a fish -- okay,  
10 let's presume that you have a hungry fish. A hungry fish  
11 will eat whatever it can that passes its way.

12 MR. TAKEI: Right.

13 HEARING OFFICER DODUC: Especially when food is  
14 limited and it's hungry.

15 MR. TAKEI: Right.

16 HEARING OFFICER DODUC: What else do you wish to  
17 establish?

18 MR. TAKEI: Well, I'm trying to understand the  
19 likelihood of the food that are going to be going up and  
20 down the stream -- we've heard from Dr. Reiser that the  
21 insects can travel both up and down stream and can travel  
22 certain distances.

23 HEARING OFFICER DODUC: But that is regardless of  
24 whether there is a hungry fish or not.

25 MR. TAKEI: Well, I don't know. If there is the

1 hungry fish there to impede the passage of that insect,  
2 then it's just -- it's going to be eaten. It's not going  
3 to be traveling up or downstream if the fish do eat them.

4 HEARING OFFICER DODUC: So you want the witness  
5 to answer or to speculate whether or not food would flow  
6 downstream in low flow conditions if there are hungry fish  
7 around it to eat it?

8 MR. TAKEI: Yes.

9 BOARD MEMBER HOPPIN: Can I try --

10 HEARING OFFICER DODUC: Because I --

11 BOARD MEMBER HOPPIN: Can I take a stab at this?  
12 Ms. Ferrari, do you mind? I mean don't worry.

13 My recollection when Mr. Berliner and Dr. Titus  
14 had the conversation about the effects of the last  
15 thousand feet of the river, and would the low food  
16 production in the last thousand feet of the river have a  
17 significant effect on the overall food in the river. Is  
18 that correct to you, Mr. Berliner?

19 MR. BERLINER: Yes.

20 BOARD MEMBER HOPPIN: Dr. Titus?

21 DR. TITUS: More or less.

22 BOARD MEMBER HOPPIN: And Dr. Titus didn't  
23 particularly like the question, because it did have a big  
24 rock attached to the end of it. But when we got to the  
25 end, Dr. Titus' statement -- and, Dr. Titus, I know you're

1 not at the microphone. And if I'm mischaracterizing this,  
2 stand up and say, "That isn't what I said." But I think  
3 where counsel was going is, no, there is no food going  
4 through these riffles because trout or steelhead are very  
5 efficient site feeders and the starving trout is not going  
6 to let one morsel of food get past it. Is that what  
7 you're getting at?

8 MR. TAKEI: That's correct.

9 BOARD MEMBER HOPPIN: My reaction to the answer  
10 of that question was that if these trout all the way up to  
11 the end of anadromy are in fact starving with the amount  
12 of food in this river, that could not potentially this  
13 river be at carrying capacity? I mean why are they  
14 starving? If they're eating every morsel of food, as Dr.  
15 Titus portrayed, there is a problem here. If there's not  
16 enough food for the trout that are there -- for the  
17 steelhead that are there today to eat in certain  
18 conditions, what are we going to do with more? I mean  
19 that's what I heard from Dr. Titus in this question and  
20 that's what I heard you going towards. And that's the  
21 unanswered question I have. I myself am not a biologist.  
22 Possibly Dr. Reiser can answer that.

23 DR. REISER: So is the question then, would this  
24 system be at carrying capacity if in fact that  
25 hypothetical that you described were the case, being that

1 every morsel of food that comes in is consumed?

2 BOARD MEMBER HOPPIN: When I look at your insect  
3 drift model, which is the next chart, Mr. Lindsay, it  
4 shows, as counsel described -- the next one.

5 --o0o--

6 BOARD MEMBER HOPPIN: -- movement in both  
7 directions of a riffle. Dr. Titus' testimony was that not  
8 one morsel of food makes it out of those riffles because  
9 steelhead trout are very efficient site feeders and  
10 they're going to eat every morsel of food and, hence, the  
11 thousand feet that Mr. Berliner was concerned with could  
12 in fact have a bearing on food production. But it's  
13 contrary to what your model says here. But this idea of  
14 trout being to the point of starving and having to grab  
15 every morsel of food in the reaches of anadromy raises a  
16 question as to the health of the river given the  
17 population that's there today.

18 DR. REISER: I would agree. And I would say  
19 that's an astute observations. And if food is truly  
20 limited -- which I've not seen any data that suggests that  
21 it is, and the models that are presented here are simply a  
22 reflection of what typically happens in stream systems;  
23 and, that is, that there's more than one source of  
24 invertebrate areas with invertebrate pathways that can  
25 replenish a given section of stream. So you have your

1 drift component, but that's certainly not the only  
2 element. In the summertime there's also adult insects  
3 that are flying. So you'll have adult fallout on the  
4 stream channel that become part of the food base.

5           If in fact food were limited in any stream  
6 system -- and there really -- in my career there have been  
7 that I can think of maybe one or two instances where food  
8 might be considered limiting. It's usually headwater  
9 streams where the productivity is so low that the amount  
10 of food that's produced in those systems is such that it  
11 does -- you know there's a limiting factor. But generally  
12 in larger river systems, including the size of the Big  
13 Sur, I wouldn't consider food as being necessarily  
14 limiting. But again I've not seen any data that suggests  
15 that.

16           HEARING OFFICER DODUC: Mr. Takei, unless you  
17 have a different line of questioning, I'm going to ask you  
18 to wrap up.

19           MR. TAKEI: I'm all done.

20           Thank you, Doctor.

21           HEARING OFFICER DODUC: All right. Thank you.

22           Since the witnesses have been up here for almost  
23 two hours, let's take a very efficient five-minute break.

24           (Whereupon a recess was taken.)

25           HEARING OFFICER DODUC: Mr. Lazar, do you wish to

1 cross?

2 MR. LAZAR: Thank you. Good afternoon. Adam  
3 Lazar, Center of Biological Diversity, California  
4 Sportfishing Protection Alliance, and Ventana Wilderness  
5 Alliance.

6 I do have a couple questions for Dr. Harvey and  
7 then a couple questions for Dr. Reiser.

8 CROSS-EXAMINATION

9 BY MR. LAZAR:

10 Q Dr. Harvey, you mentioned repeatedly a particular  
11 definition that you've given to zone of influence. Could  
12 you repeat that, please?

13 A It's the zone in which pumping influences the flow of  
14 water.

15 MR. LAZAR: Can we take a look at ESR-7, please.

16 --o0o--

17 BY MR. LAZAR:

18 Q Dr. Harvey, please read the first sentence of that  
19 memorandum there.

20 A "In our 2007 and 2008 technical reports, SGI concluded  
21 that the irrigation well pumping zone of influence  
22 extended approximately 1,000 feet upstream of the new well  
23 location."

24 MR. LAZAR: Okay. And can we take a look at  
25 ESR-6 now?



1 MS. TEETERS: Objection. That misstates the  
2 actual testimony that's been given.

3 HEARING OFFICER DODUC: I'm sorry. Would you  
4 repeat that?

5 MS. TEETERS: It misstates what testimony the El  
6 Sur Ranch has given. The written testimony states that  
7 it's upstream of the new well.

8 HEARING OFFICER DODUC: Ms. Lazar, please ask  
9 your question without restating the testimony.

10 MR. LAZAR: I see.

11 --o0o--

12 BY MR. LAZAR:

13 Q A moment ago you defined the zone of influence how --

14 A As the --

15 MR. BERLINER: Objection. Asked and answered.

16 HEARING OFFICER DODUC: Let's let him answer for  
17 my own edification, if nothing else.

18 DR. HARVEY: As the zone that influences the flow  
19 of water. And I meant groundwater by that.

20 BY MR. LAZAR:

21 Q And from these SGI reports, does it appear that they  
22 define zone of influence in some manner regarding this  
23 1,000 foot radius?

24 A Yes. The only difference I see here is that they  
25 require it to be a circle by using the radius.

1 Q I see. Let's keep looking here.

2 What's the zone of influence there in the  
3 Creamery Meadow?

4 A In the way it's drawn here, it extends -- I can't see  
5 a scale on it, but it extends --

6 Q Let me bounce around just a little please.

7 A That's the way it's drawn here. If you're asking me  
8 what it actually is, I don't believe there's any wells in  
9 the Creamery Meadow.

10 Q So what were the measurements taken then in the zone  
11 of influence in Creamery Meadow?

12 A I don't know of any that were taken in Creamery  
13 Meadow.

14 Q Are there any particular locations where it appears  
15 that measurements were taken in Creamery Meadow?

16 A No.

17 Q Could the zone of influence be larger than what is  
18 described here by this radius?

19 A Yeah. I mean this is an approximation based on  
20 looking at drawdowns on the other side of the river and  
21 part on the piezometers that are placed into the river.  
22 So it's an extrapolation of that.

23 Q And if we could scroll up just a little bit.

24 Is it possible that water could be entering the  
25 aquifer above where that outer radius is occurring then?

1 A The upstream piezometers didn't appear to show much  
2 effect when the wells were turned on. So it wouldn't be  
3 much.

4 Q It wouldn't be much.

5 But we don't actually have measurements from  
6 Creamery Meadow then?

7 A As far as I know, there's no wells and no other sort  
8 of measurement in Creamery Meadow.

9 Q Okay. You mentioned before a figure called a Delta R.

10 Can we go to Dr. Harvey's exhibit, please.

11 Let's go to the next page.

12 The change in river exchange, Delta R.

13 --o0o--

14 BY MR. LAZAR:

15 Q Explain what the Delta R is there.

16 A Yeah. So that's the change in flow between the  
17 aquifer and the river from the condition of no pumping and  
18 the condition of pumping. So there will be -- once you  
19 start pumping, there will be less net flow from the  
20 aquifer to the river or, the equivalent to say, more net  
21 flow from the river to the aquifer.

22 Q So could Delta R be water just entering into the zone  
23 of influence as SGI defined it or could it also be  
24 entering above the zone of influence as SGI defined it?

25 A It's entering within the zone of influence.

1 Q And how do you determine that?

2 A Now, you see on this diagram I didn't actually put a  
3 coordinate on that. So I'm not determining exactly where  
4 it is.

5 Q I see. So you're not actually basing this on SGI's  
6 data?

7 A This diagram is just sort of a fundamental water  
8 balance, you might say.

9 Q So in other words, the SGI graph that I just had up  
10 there, this study, this diagram here is not actually based  
11 on the diagram that I had up there a minute ago?

12 A No. It would apply to that.

13 Q It would apply?

14 A It would also apply to some completely different  
15 system. It's a, you know, sort of a basic inputs equal  
16 output kind of thing.

17 Q I see. Very helpful. Thank you.

18 Is setting flow criteria based on a single depth  
19 measurement appropriate?

20 MS. GOLDSMITH: Objection. This goes way beyond  
21 anything that Dr. Harvey testified about or was qualified  
22 to testify about.

23 HEARING OFFICER DODUC: Mr. Lazar.

24 MR. LAZAR: I believe that Mr. Harvey -- or,  
25 excuse me -- Dr. Harvey testified about the problems with

1 Dr. Titus' studies and therefore the inability to set flow  
2 criteria based on those studies. I'm responding to his  
3 conclusions about the inability to accept flow criteria  
4 based on the studies.

5 HEARING OFFICER DODUC: Ms. Goldsmith.

6 MS. GOLDSMITH: I don't believe that Dr. Harvey  
7 testified about that. Perhaps you are thinking of Dr.  
8 Reiser.

9 MR. LAZAR: I may very well -- I believe I am  
10 getting my doctors confused here.

11 HEARING OFFICER DODUC: Do you wish to switch to  
12 the other witness now?

13 MR. LAZAR: I would like to ask Dr. Reiser that  
14 question.

15 HEARING OFFICER DODUC: Let's do that.

16 DR. REISER: Can you repeat the question, please?

17 CROSS-EXAMINATION

18 BY MR. LAZAR:

19 Q Dr. Reiser, would you consider setting flow criteria  
20 based on a single depth measurement to be appropriate?

21 A No.

22 Q Are you aware that El Sur Ranch set their flow  
23 requirements based on a single depth measurement?

24 MR. BERLINER: Objection. Assumes facts not in  
25 evidence.

1 HEARING OFFICER DODUC: Restate your question,  
2 Mr. Lazar.

3 MR. LAZAR: I am not aware of what facts are not  
4 in evidence.

5 Please explain the objection.

6 HEARING OFFICER DODUC: You might want to ask,  
7 for example, if the witness is aware of how ESR estimated  
8 their -- I'm not an attorney, Mr. Lazar.

9 MR. LAZAR: I understand that.

10 BY MR. LAZAR:

11 Q Are you familiar with how the applicant set their flow  
12 requirement?

13 A No.

14 Q Thank you.

15 I believe this next question is for Dr. Reiser.  
16 But I could be wrong.

17 Dr. Reiser, is PHABSIM another way to  
18 characterize whether depth is sufficient for appropriate  
19 rearing habitat?

20 MR. BERLINER: Objection. Beyond the scope.

21 MR. LAZAR: I believe that there was a criticism  
22 of the setting of the habitat based on the wetted  
23 perimeter model. And my question goes to whether or not  
24 there are other methods to set criteria for flow other  
25 than the wetted perimeter.

1 HEARING OFFICER DODUC: Then why don't you ask  
2 that question.

3 MR. LAZAR:

4 BY MR. LAZAR:

5 Q Are there other methods to set minimum flow criteria  
6 beyond the wetted perimeter model?

7 A Yes, there are.

8 Q Is PHABSIM one such method?

9 A It can be used for that, yes.

10 Q Thank you.

11 And, Dr. Reiser, in the charts that you just  
12 showed showing drift and food, can we take another look at  
13 those? Those would be in Dr. Reiser's exhibits.

14 Perfect.

15 --o0o--

16 BY MR. LAZAR:

17 Q Let's take a look at those sources listed at the  
18 bottom there.

19 How many of those streams in the sources that you  
20 cited there exhibit extremely low flow conditions?

21 A I don't know.

22 Q In an extremely low flow condition, wouldn't a greater  
23 fraction of food be consumed in a particular pool?

24 A Well, first of all, I'm not sure what you mean by  
25 extremely low condition. That would vary by different

1 streams.

2 Q Let's say basically the pools within the Big Sur River  
3 study area.

4 A And the first part of the question again? I'm sorry.

5 Q In extremely low flow conditions, would a greater  
6 fraction of food be consumed?

7 A It's likely it would be, yes.

8 Q Is it possible for a fish to eat all of the food that  
9 comes into a pool?

10 A That's quite an expansive question or open-ended  
11 question. I would -- without knowing the size of the pool  
12 and the amount of food that's actually being delivered and  
13 the number of fish that are in that pool, I couldn't  
14 answer definitively.

15 Q I see. So in a series of variables that work out in a  
16 particular way, then it would be possible? Would it be  
17 possible?

18 MR. BERLINER: Objection. Relevance.

19 HEARING OFFICER DODUC: Mr. Lazar.

20 MR. LAZAR: I believe the question is relevant to  
21 the previous testimony on drift and flow of food.

22 MR. BERLINER: Well, this question's not. I mean  
23 if you're going to ask if there's a huge fish in a little  
24 pond and one piece of food -- I fail to see the relevance.  
25 There's no facts in this case that support that.

1 HEARING OFFICER DODUC: I'll go ahead and allow  
2 the question.

3 The witness will answer to the best of your  
4 ability.

5 DR. REISER: I'm sorry, but could you restate it?

6 MR. LAZAR: Let me ask a different question.

7 BY MR. LAZAR:

8 Q You've discussed drift and low food production in your  
9 rebuttal testimony. Would low food production in the  
10 bottom 1,000 feet of a river have an effect on the food in  
11 the lagoon?

12 A Well, you're looking at different conditions in the  
13 lagoon than you are in the stream itself. So you're  
14 looking at different salinity conditions. Fresh water  
15 invertebrates generally are very sensitive to saltwater  
16 conditions because they're not adapted. They're not meant  
17 to exist in saltwater. So in general, I would think that  
18 the organisms that are coming down fresh water would tend  
19 to fall out quickly after input into the lagoon itself.

20 So your question again, see if I restate it  
21 correctly, would low flow conditions and food -- here I am  
22 restating this question. I'm sorry.

23 Q I believe my question was if low flow conditions --  
24 no, excuse me. That was not my question.

25 My question was whether food production, low food

1 production specifically, in the bottom 1,000 feet of a  
2 river have an impact on the food available in the lagoon?

3 A I suppose hypothetically it could at the upper end of  
4 the lagoon, yes.

5 Q And could that also affect carrying capacity of the  
6 lagoon?

7 A I'm only hesitating because once the steelhead, if  
8 they're moving down or holding in the lagoon, they're then  
9 relying on more estuarine-type organisms that are not  
10 necessarily emanating or originating from the surface  
11 system. So it may have some effect. Would it have a  
12 large effect? I don't know.

13 Q It's not from the surface flow. Estuarine, does that  
14 mean that it's coming from the ocean or from the  
15 groundwater? I'm not familiar with what you mean by  
16 estuarine in terms of the --

17 A I think there would be a combination.

18 Q Combination of ocean and groundwater. I see.

19 And in addition to food production, are dissolved  
20 oxygen and high temperatures also criteria that you would  
21 measure the ability for fish to be healthy?

22 MR. BERLINER: Objection. Beyond the scope of  
23 his testimony.

24 HEARING OFFICER DODUC: Please restate your  
25 question.

1 BY MR. LAZAR:

2 Q Dr. Reiser, we've spent a lot of time focusing on  
3 whether there's sufficient food for the fish here due to  
4 drift within the El Sur study area. We've also heard  
5 testimony from Dr. Dettman, Dr. Titus, Mr. Custis, some  
6 others regarding dissolved oxygen and high temperatures.  
7 I believe that the applicant's experts have also testified  
8 on this subject. Are dissolved and high temperatures also  
9 factors in considering the health of the habitat or the  
10 suitability of the habitat for the steelhead?

11 MR. BERLINER: Objection. Beyond the scope of  
12 his testimony.

13 HEARING OFFICER DODUC: I think, as I said  
14 before, on cross going beyond the scope of the direct is  
15 allowed if it's relevant. So I'll allow the question.

16 Please answer it.

17 DR. REISER: Yes.

18 MR. LAZAR: Thank you. No further questions.

19 HEARING OFFICER DODUC: Thank you, Mr. Lazar.

20 Mr. Johnson, do you have cross?

21 MR. JOHNSON: I don't.

22 HEARING OFFICER DODUC: Thank you, Mr. Johnson.

23 Mr. LeNeve, do you have cross?

24 MR. LE NEVE: No.

25 HEARING OFFICER DODUC: Thank you, Mr. LeNeve.

1           That should conclude your rebuttal.

2           Do you wish to move these exhibits into evidence,  
3 Ms. Goldsmith and Mr. Berliner?

4           MS. GOLDSMITH: I do wish to move into evidence  
5 45 and 46A and B. I believe that was right.

6           STAFF GEOLOGIST MURPHEY: Actually, starts with  
7 48 to 54.

8           MS. GOLDSMITH: Well, I'd like to move into  
9 evidence Dr. Harvey's CV, which --

10          STAFF GEOLOGIST MURPHEY: -- is --

11          MS. GOLDSMITH: Is that 48?

12          STAFF GEOLOGIST MURPHEY: Yeah, that's 48.

13          49A and B --

14          MS. GOLDSMITH: 49A and B, which is the --

15          STAFF GEOLOGIST MURPHEY: Okay.

16          HEARING OFFICER DODUC: And Mr. Berliner has?

17          MR. BERLINER: I have redirect, Your Honor.

18          HEARING OFFICER DODUC: I'm not allowing redirect  
19 on rebuttal.

20          MR. BERLINER: Okay. Then we would like to move  
21 the exhibits into evidence.

22          HEARING OFFICER DODUC: Before we do though, I've  
23 got to check.

24          Are there questions from the staff?

25          Mr. Lindsay.

1 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:

2 Yes. These are for Dr. Harvey.

3 I just want to make sure I understand ESR-49A and  
4 49B. And, Mr. Murphey, if you want to jump in here and  
5 help me out.

6 Okay. These are to rebut the Dr. Custis bath  
7 analogy, right?

8 DR. HARVEY: Well, I drew them to illustrate  
9 water balance and to illustrate where the water -- where  
10 the pump well comes from.

11 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
12 Okay. So I take it the difference between the bathtub  
13 analogy is the fact there's inflow "I" and discharge "D";  
14 is that the main difference here?

15 DR. HARVEY: Yes. You probably go to the second  
16 slide to compare it to the bathtub.

17 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
18 So looking at the area here represented by this cylinder  
19 and going on to the next cylinder, that's the same place,  
20 right?

21 DR. HARVEY: That's right.

22 So to answer your question, the bathtub analogy  
23 in the first equation would be "Q" equals "S". So you're  
24 draining water out of the bathtub at a rate of "Q" and  
25 you're liberating water here.

1 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
2 And nothing else comes in?

3 DR. HARVEY: It is not. It's such a basic thing,  
4 it's kind of -- you know.

5 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
6 Okay. I take from this -- I'm asking questions I really  
7 don't understand. So I want to make sure I understand.  
8 This is my -- we'll get this a month from now.

9 So I'm looking at this diagram. I see the change  
10 in discharge on the left side there and arrows pointing  
11 down. And it implies to me that that "D" approaches zero  
12 over time.

13 DR. HARVEY: No, no. And this is probably the  
14 most confusing aspect, a little Delta D. What I mean by  
15 the deltas there is the change before and after pumping.  
16 So if pumping does decrease discharge to the ocean, then  
17 that would actually grow with time until it stabilizes.  
18 So you would -- initially when you're pumping you're  
19 getting the water out of storage. And if it did decrease  
20 that, then that would reach a stable. You would decrease  
21 the amount of water flowing to the ocean by a certain  
22 amount and it would stabilize.

23 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
24 I don't want to oversimplify the "New Steady State" there  
25 at the bottom. But I read that as "Q". So as that "D"

1 gets smaller, the "R" gets larger?

2 DR. HARVEY: Yes.

3 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
4 So over time more is pulled from the river?

5 DR. HARVEY: Yes. So that at the pumping -- the  
6 rate the water is withdrawn is explained by those two  
7 things. Well --

8 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
9 Where is the "I" in that New Steady State equation?

10 DR. HARVEY: It's not. See the Delta I equals  
11 zero up here. The point is is that the zone of influence  
12 doesn't extend -- doesn't extend out of the system. It  
13 ends at some point in the aquifer and there's a rate of  
14 water flowing in. People called it the underflow here  
15 that's coming in, regardless of whether you're pumping or  
16 not, coming into this area.

17 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
18 But wouldn't the "Q" have an "I" component? Isn't that  
19 all linked by "Q"?

20 DR. HARVEY: No, no. This just says that when  
21 you're pumping a rate "Q" it has to be coming from  
22 somewhere. And after you've reached a steady state, it's  
23 coming from decreased flow of the river or from decreased  
24 direct discharge in the ocean.

25 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:

1 I thought the bathtub model had walls, whereas --

2 DR. HARVEY: Well, this isn't the bathtub I --  
3 I'm talking about this as I presented it.

4 STAFF GEOLOGIST MURPHEY: Well, wouldn't part of  
5 "Q" be just "I"? It wouldn't be Delta I, because there's  
6 a certain component; you know, part of the groundwater's  
7 being withdrawn from the pumps is so it can reach the  
8 steady state.

9 DR. HARVEY: Yeah, yeah. Well, that's right.  
10 There is still -- Delta I is equal to zero. "I" is still  
11 equal to whatever it was.

12 STAFF GEOLOGIST MURPHEY: All right. So "Q" --

13 DR. HARVEY: So, yeah, that water, "I" that's  
14 coming in is either discharging into the river or  
15 discharging straight into the ocean. And what this says  
16 is that when you pump, you either decrease what's  
17 discharging into the river or you decrease what's  
18 discharging into the ocean. So by pumping you capture  
19 that "I". You don't change the "I" flowing in, but you  
20 prevent it from going where it -- you know, where it would  
21 have gone without pumping.

22 STAFF GEOLOGIST MURPHEY: Okay. But it would be  
23 incorrect to put "plus I" at the end of that New Steady  
24 State?

25 DR. HARVEY: That would be incorrect. I mean --

1 because there's no reason why "I" is, as I've drawn it  
2 here, a constant. So your pumping rate, you know, that  
3 could be five cubic feet per second, it could be one cubic  
4 feet per second.

5 STAFF GEOLOGIST MURPHEY: Okay. So say "Q" is  
6 being pumped -- say 5.84 cfs is being pumped.

7 MS. GOLDSMITH: Purely hypothetical.

8 DR. HARVEY: Yes.

9 STAFF GEOLOGIST MURPHEY: Yeah, this whole  
10 diagram is hypothetical or, you know, it's conceptual  
11 model.

12 DR. HARVEY: That's right, yeah.

13 STAFF GEOLOGIST MURPHEY: So 5.84 would equal  
14 change in "R" plus change in "D".

15 DR. HARVEY: That's right.

16 STAFF GEOLOGIST MURPHEY: And it wouldn't -- none  
17 of the 5.84 cfs would come from the "I".

18 DR. HARVEY: It would equal the change of these  
19 things, that's true. When you say come from "I," okay,  
20 the water that you're capturing, some of it did flow in  
21 from, you know, upstream. But you haven't changed the  
22 amount of flow.

23 STAFF GEOLOGIST MURPHEY: But there is some  
24 component --

25 DR. HARVEY: Yeah.

1           STAFF GEOLOGIST MURPHEY:  -- from the 5.84 which  
2 is coming from groundwater.

3           DR. HARVEY:  Yeah.  Part of the reason I wrote it  
4 this way was so that we could focus on the change in flow  
5 in the river.  Okay?  And that's the Delta R.

6           SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
7 I think you got two engineers here.  I know you tried to  
8 make it simple.  But we're trying to make sure we  
9 understand the equation.

10           So with "Q" equal 5.34 cfs, any idea how long  
11 that steady state would last?

12           DR. HARVEY:  Well, there's some pump tests --  
13 sorry -- during some of the pump tests -- well, let me  
14 restate that.

15           During the pump test some of the observation  
16 wells showed a stability in a matter of four days and some  
17 showed that it took longer.  And other evidence shows that  
18 it takes a bit longer as well.

19           SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
20 And once the steady state is reached, how long would it  
21 last, 5.34 cfs?  Do you know that?

22           DR. HARVEY:  If nothing else changes, it would  
23 last forever.  Now, that -- you know, maybe I'm being a  
24 little bit -- you know, the rainfalls come, the river  
25 flows, you know, and things change.  But if nothing else

1 changes in the system, there is no other change due to  
2 rain or anything like that, then you just sit there  
3 forever with -- you're pumping at the same rate that  
4 you're capturing the river water and decreasing discharge  
5 to the ocean.

6 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
7 And I'm looking for understanding in this equation. This  
8 will be my last question, I promise.

9 So as "D" approaches zero and "I" stays the same,  
10 you don't really know --

11 DR. HARVEY: I don't think --

12 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
13 I'm probably trying to make too much of this.

14 DR. HARVEY: Yeah, I think we started out with  
15 what happens to Delta D over time. Okay? I can tell you  
16 that initially when you first start pumping, nothing  
17 happens to it, because your drawdown pump doesn't extend  
18 to the ocean.

19 If your drawdown cone of influence extends all  
20 the way to the ocean and there's groundwater discharging  
21 into the ocean, then you will reduce that, and that will  
22 be your Delta D. And at some point the whole thing  
23 stabilizes and the Delta D the same. Okay?

24 Now, what isn't in Delta D is necessarily in  
25 Delta R, the reduction in flow in the river.

1 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:

2 Okay. Thank you.

3 HEARING OFFICER DODUC: Ms. Mahaney.

4 SENIOR STAFF COUNSEL MAHANEY: Just a simple  
5 procedural question. I just wanted to find out, both of  
6 you took the oath; is that correct?

7 DR. HARVEY: I did not.

8 Should we follow up on that?

9 SENIOR STAFF COUNSEL MAHANEY: Yes, would you  
10 like to administer the oath and have it also cover the  
11 testimony that's been given this afternoon.

12 HEARING OFFICER DODUC: Could you please stand  
13 and raise your right hand.

14 Did you tell the truth during your testimony and  
15 cross this afternoon and will you continue to tell the  
16 truth?

17 DR. HARVEY: I will and I did.

18 HEARING OFFICER DODUC: And you did. Thank you.

19 Did I phrase that right?

20 Any other questions?

21 And we heard a motion to move into evidence ESR's  
22 rebuttal exhibits.

23 Any objections?

24 Hearing none, we'll go ahead and accept those  
25 exhibits into the record.

1           (Whereupon Exhibits ESR-48 and 49A&B,  
2           were admitted into evidence.)

3           HEARING OFFICER DODUC: Thank you. Safe travels  
4 to both of you.

5           And with that, we'll ask Mr. LeNeve to come up  
6 for his rebuttal.

7           I believe, Mr. Johnson, if we are efficient  
8 enough, you had asked to also have your rebuttal done  
9 today.

10          MR. JOHNSON: I just think it might make sense  
11 because it will be pretty short. So if you're looking for  
12 something to --

13          HEARING OFFICER DODUC: We will do that as well.

14          Ms. Goldsmith, do you wish to go ahead and take a  
15 seat there in order to state your objections?

16          MS. GOLDSMITH: Yes.

17          HEARING OFFICER DODUC: My apologies. It's  
18 getting late.

19          You can begin when you're ready, Mr. Lazar.

20          MR. LAZAR: Thank you.

21          HEARING OFFICER DODUC: Oh, she's taking me up on  
22 the offer.

23          MS. GOLDSMITH: I am. I'm tired too.

24          HEARING OFFICER DODUC: Go ahead, Mr. Lazar.

25          MR. LAZAR: I believe earlier we were looking at

1 CRSA-22.

2 MR. LE NEVE: Yes.

3 HEARING OFFICER DODUC: Twenty-two, right.

4 MR. LAZAR: Excuse me. I'm Adam Lazar and I'm  
5 with the Center for Biological Diversity, providing legal  
6 counsel at this point for Carmel River Steelhead  
7 Association on rebuttal.

8 HEARING OFFICER DODUC: Now, let's go ahead and  
9 state that Ms. Goldsmith's standing objection, even though  
10 she's sitting now, with respect to the hearsay nature of  
11 this testimony is noted and will be considered in weighing  
12 the evidence.

13 MR. LAZAR: Mr. Lindsay, can we look at CRSA-22?

14 SENIOR WATER RESOURCES CONTROL ENGINEER LINDSAY:  
15 Yes.

16 REBUTTAL DIRECT EXAMINATION

17 BY MR. LAZAR:

18 Q Now, Mr. LeNeve, when you were providing your direct  
19 testimony earlier, you began to describe this chart here,  
20 at which point it was agreed that we would address this  
21 chart during rebuttal.

22 Have you had an opportunity to review this chart  
23 before? Did you prepare this chart?

24 A I prepared the chart.

25 HEARING OFFICER DODUC: First of all, have you

1 shared this chart with everybody?

2 MR. LE NEVE: Yes, I have.

3 BY MR. LAZAR:

4 Q And can you describe what this chart says?

5 A Basically El Sur Ranch has been maintained. There's a  
6 large and healthy population of fish. And there's been  
7 indication that the run on fish on Big Sur River was as  
8 low as 270 to 300 fish. And those of us who have fished  
9 the river for so many years know that's not close to being  
10 accurate. So what I did was to contact a bunch of people  
11 I knew who fished the Big Sur River in the late '50s,  
12 '60s, and '70s and ask for their opinion as to what the  
13 run of fish was, how many fish fishermen caught, and then  
14 try to determine based on that both how many we caught and  
15 what they thought what the run of fish was.

16 So, for example, when I said how many fish were  
17 caught in the '50s and '60s, that was caught by all  
18 parties right there. I asked the people how many fish did  
19 they think that everyone on the river caught for the whole  
20 season. And, you know, the responses were, accept for one  
21 guy was quite obviously wrong at 1500 fish, but the rest  
22 of the responses were pretty close to one another. And I  
23 put my name in there first and I came up with 250. And  
24 most people actually thought it was more than that.

25 Q How did you evaluate those numbers?

1 A It was based on what I personally caught. It was  
2 based on what all of my friends caught. It was a pretty  
3 close knit group fishing the river in those days. A lot  
4 of us still fish the river -- other rivers today. So  
5 we're still in constant with one another.

6 So, you know, we had a pretty rough idea of what  
7 we were catching. I think this is the first time it's  
8 ever put down on paper.

9 Q Now, these different explanations provided by people  
10 you contacted, are those included in the exhibits here?

11 A The letters I got were. Most of the letters -- it was  
12 hard to get people to write letters. I think we all know  
13 that. And most of them didn't address what I wanted them  
14 to address. So when I had a person interested, I would  
15 call them back and interview them to try to get the pieces  
16 of information I had. As I say, the blanks there were  
17 people I never did get back to. And the question marks  
18 are basically the person just didn't feel qualified to  
19 answer the questions.

20 Q I believe that the letters you've identified at least  
21 for rebuttal purposes are CRSA 6, 7, 8, 9, 10, and 11.

22 Is that your observation as well?

23 A That is on what I'm presenting today. But there was  
24 also exhibits I believe is 2, 3, 4, and 5 of the original.

25 Q Which were also letters?

1 A Yes.

2 Q Okay. And then CRSA 12 and 13 both describe the Keogh  
3 River.

4 A One of the things I tried to do was determine what the  
5 run could have been based on different criteria. And so I  
6 was trying to determine what the survival rate -- it was  
7 always based on Dr. Hanson's comment about there being  
8 basically less than 400 fish in 1.44 miles of river. And  
9 so what would the survival of those fish be if they went  
10 out to sea. So I'm spending quite a bit of time on the  
11 Internet. These were the three different surveys I could  
12 see from smolt to adult and what their survival rates  
13 were. And they range anywhere from maybe 3 to 4 percent  
14 up to 27 percent.

15 Q When you say three different studies, I can see  
16 CRSA-12 refers to Keogh Creek.

17 A That's actually the Keogh and the Snow Hill Creek.  
18 When Keogh was in Washington, Snow Creek was in British  
19 Columbia. So there's two rivers represented in this  
20 survey.

21 Q CRSA-14 is for Soquel Creek?

22 A Yes.

23 Q And then CRSA-15 is for the Carmel River.

24 A And that's just based -- that's not -- that was not a  
25 smolt to adult thing. That was something that Monterey

1 Water Management District provided to me showing how many  
2 juveniles inhabit a section of river on the Carmel.

3 Q And so using these different stream -- these  
4 contrasting surveys and streams, what were the conclusions  
5 you were able to draw?

6 A That the run on fish on the Big Sur River was huge  
7 compared to what other people have thought. If you  
8 look --

9 Q Excuse me. When you say huge, do you mean huge  
10 historically or presently?

11 A Huge historically. And of course historically is, you  
12 know, I'm talking about the late '50s, '60s and early  
13 '70s. I have no idea what it was in the '20s, you know.

14 And the reason I say that it's huge, if you look  
15 at the last column as to how many fish can we still have  
16 CRSA-22 up there, how many fish people saw in one day.  
17 Now, we've had the highest estimate I've seen on -- given  
18 out in this testimony as being 300 fish on the whole run  
19 of the river -- or the whole run of fish on the Big Sur  
20 River. Yet there's I think four people here that saw 200  
21 fish in one given day and two people that saw 300 fish in  
22 one given day. It's pretty hard to have a run of 300 fish  
23 if people could see 300 in one given day. It just -- it  
24 doesn't make sense. So we have to come up with a better  
25 way to determine what the run used to be.

1 Q I'd also like to point out that CRSA-18, 19, 20, and  
2 21 are also personal letters. Could you verify, Mr.  
3 LeNeve, that these 18, 19, 20, and 21 are also personal  
4 accounts?

5 A Yes, they were. They came in after I had done some  
6 other things and got me through the list -- the CRSA  
7 personal letters.

8 Q Now, Mr. --

9 A And just to clarify the exhibits. CRSA 17 is -- we  
10 were talking about, okay, how many people actually fished  
11 the river in those days. Could we have had that many fish  
12 caught by so many people? And three guys and I sat  
13 together for a couple different meetings and we came up  
14 with 77 people that had fished the Big Sur River in those  
15 days. And that was by no means all the people on the  
16 river.

17 Q Now, I understand Ms. Goldsmith has a standing  
18 objection based on hearsay. Were you able to find anyone  
19 to provide authentication or to come in and make personal  
20 testimony as to the truth and substance of their written  
21 testimony to you?

22 A I have one person on the stand today who is on this  
23 list, Mr. Cunningham.

24 Q Jim Cunningham?

25 A Yes.

1 Q So Mr. Cunningham is available to authenticate the  
2 testimony that he wrote as an exhibit, CRSA-7?

3 A Yes, and to testify to what is on the schedule I  
4 provided also.

5 MR. LAZAR: At this point I'd like to invite Mr.  
6 Cunningham up to provide authentication for his testimony.

7 HEARING OFFICER DODUC: Mr. Cunningham.

8 And I believe Mr. Cunningham also had a policy  
9 statement.

10 MR. LE NEVE: Yes, he did. But I do not believe  
11 he's been sworn.

12 HEARING OFFICER DODUC: Okay. Ms. Goldsmith.

13 MS. GOLDSMITH: As I recall, Mr. Cunningham is  
14 not available on Monday; is that correct?

15 HEARING OFFICER DODUC: That was correct.

16 Mr. Cunningham, would you please raise your right  
17 hand.

18 (Whereupon the witness was sworn.)

19 MR. CUNNINGHAM: I do.

20 HEARING OFFICER DODUC: Thank you.

21 DIRECT EXAMINATION

22 BY MR. LAZAR:

23 Q Mr. Cunningham, are you familiar with the letter  
24 provided that Mr. LeNeve has identified as CRSA-7?

25 A Yes, I am.

1 Q Did you write this letter?

2 A Yes, I did.

3 Q And can you verify that the contents here are true and  
4 accurate to the best of your knowledge?

5 A As best as memory can survive.

6 Q Now, earlier Mr. LeNeve said that fishermen tend to  
7 lie. But then I was talking to you a minute ago and you  
8 said, "Yes, they lie but..." Can you tell me what that  
9 "but" was?

10 A Well, as I look back, we called ourselves fishermen  
11 but we were really hunters, and we developed very unique  
12 ways to catch the steelheaded kelt.

13 MR. LAZAR: Can we take another look at CRSA-22,  
14 please.

15 --o0o--

16 BY MR. LAZAR:

17 Q I believe the comment was made earlier that it seemed  
18 incredible that there could be this number of fish. It  
19 also seemed incredible that you could catch this number of  
20 fish. I think the term is a fish story.

21 A Well, again, to explain my technique, they were very  
22 unique, very unfair, unfortunately. But I could see the  
23 fish look at the water and actually hunt them. And I  
24 could take any number I wanted.

25 Q And so --

1 A And I did so.

2 Q So the numbers that you provided to Mr. LeNeve that  
3 are reflected in number 22 are, to the best of your  
4 recollection, accurate?

5 A Yes.

6 Q And did you take records when you were using these  
7 masks?

8 A We took records. In fact, I've got hundreds of  
9 pictures of steelhead and friends of ours, all in groups  
10 and singles and et cetera. But basically we kept head  
11 counts. I didn't keep a card. But I remember the one  
12 year it's 78, that was the most fish I ever got from the  
13 Big Sur River itself.

14 Q Seventy-eight?

15 A Yes, out of that river. I didn't include the Carmel  
16 River.

17 Q And did 78 strike you as pretty high?

18 A Well, I was pretty impressed. So were other people.  
19 But the guys -- the people with me, around me never took  
20 that number. But when they were with me, we did take  
21 limits easily.

22 Q I'm sorry. What was that last sentence?

23 A We did take limits easily, which were two fish.

24 Q I see. And do you have any observations on the  
25 current status of the river?

1 A Well, I basically stopped fishing the river, it would  
2 have been the -- around the '90s. And I've been down  
3 there a couple of times and I decided then I would take no  
4 more steelhead and keep them. There were so few fish, it  
5 wasn't even worth going back for some of them. We decided  
6 to go north to a hatchery group. That's what I've done  
7 the last 20 years.

8 Q So would you characterize your testimony as you wrote  
9 it down here that there used to be successful fishing,  
10 there used to be a lot of fish?

11 A Thousands.

12 Q And would you characterize your testimony currently  
13 that there are far fewer fish then?

14 A Could you repeat it please.

15 Q Is your understanding of the river -- as I understand  
16 from what you said a second ago, the reason why you  
17 stopped fishing in the river was because there were so few  
18 fish.

19 A Very definitely.

20 Q And is it your understanding that that condition  
21 continues in the present day?

22 A Yes.

23 MR. LAZAR: Thank you, Mr. Cunningham.

24 I have no further questions.

25 HEARING OFFICER DODUC: Thank you, Mr. Lazar.

1 MR. LAZAR: Actually, I take that back. I do  
2 have a couple more questions for Mr. Cunningham.

3 HEARING OFFICER DODUC: Well, you actually ran  
4 out of time I few minutes ago. But please try to be as  
5 efficient as possible.

6 MR. LAZAR: The last question.

7 BY MR. LAZAR:

8 Q Have you ever seen any salmon in the river?

9 A Yes.

10 Q And what time of year did you see those?

11 A Those would be generally from August through the  
12 middle of December, both kings and silvers and chub.

13 MR. LAZAR: Thank you. No further questions.

14 BOARD MEMBER HOPPIN: Mr. Cunningham, this is for  
15 you.

16 These fish you caught, were the fish released or  
17 catch and eat in those days?

18 MR. CUNNINGHAM: Catch and eat.

19 HEARING OFFICER DODUC: Mr. Johnson, do you have  
20 cross?

21 MR. JOHNSON: No.

22 HEARING OFFICER DODUC: Ms. Ferrari, do you have  
23 cross?

24 MS. FERRARI: No.

25 HEARING OFFICER DODUC: Ms. Goldsmith, do you

1 have cross?

2 MS. GOLDSMITH: I do have cross.

3 CROSS-EXAMINATION

4 BY MS. GOLDSMITH:

5 Q Now, you -- I believe it was Mr. LeNeve. I may have  
6 my witnesses wrong, but I hope you'll correct me.

7 Mr. LeNeve, you said that the fishery was huge  
8 historically.

9 HEARING OFFICER DODUC: Could you get a little  
10 bit closer to the microphone.

11 BY MS. GOLDSMITH:

12 Q You said the fishery was huge historically, if I call.  
13 Was that you or was it Mr. Cunningham?

14 A Yes, I did.

15 Q And you basically said --

16 A But that was -- huge is an arbitrary figure as  
17 compared to what you want compared to 2. But compared to  
18 300, it was huge.

19 Q And you said it was huge historically in the '50s,  
20 '60s, and '70s; is that right?

21 A Yes.

22 Q And are you aware that Fish and Game used to plant  
23 fish in the Big Sur River until 1975?

24 A Yes, I do.

25 MR. LAZAR: I believe that question and entire

1 line of questions have already answered and answered  
2 previously.

3 HEARING OFFICER DODUC: But I will allow it.

4 Please continue, Ms. Goldsmith.

5 BY MS. GOLDSMITH:

6 Q And, Mr. Cunningham, when you caught 78 fish in one  
7 year, what year was that?

8 A That was approximately 1961.

9 Q And you haven't fished on the Big Sur River for  
10 20 years?

11 A That would be about correct, yes.

12 Q Have you been down there to assess whether or not it's  
13 worth fishing?

14 A Yes. Most recently being July 4th.

15 MS. GOLDSMITH: I'd like to ask some questions of  
16 Mr. LeNeve about CRSA-22.

17 BY MS. CUNNINGHAM:

18 Q Well, first of all, Mr. Cunningham, you basically said  
19 that the figures that appear by your name on CRSA-22 are  
20 correct?

21 A Yes, ma'am.

22 Q How did you arrive at the number 3,000 to 4,000 fish  
23 in the Big Sur in the early years?

24 A I don't think it was a guess by any stretch, when we  
25 would go down to the lagoon and find a hundred fish inside

1 the lagoon, of which we could harvest easily many days 25  
2 to 30, which we did.

3 Q But that's a far stretch from the 3,000 to 4,000 fish  
4 in the river. Did you count the fish in the river?

5 A Excuse me. May I clarify?

6 Q Certainly.

7 A What I propose would be the total run of fish that  
8 year.

9 Q How did you arrive at 3,000 to 4,000 fish in the river  
10 in whatever year it is that you have put down here as,  
11 quote, the early years?

12 A Well --

13 MR. LAZAR: Objection. I believe that Mr.  
14 Cunningham just finished answering that question.

15 MS. GOLDSMITH: No, he testified that he saw 300  
16 fish or 400 fish in the lagoon.

17 HEARING OFFICER DODUC: Please ask your question  
18 again, Ms. Goldsmith.

19 MS. GOLDSMITH: How does Mr. Cunningham arrive at  
20 a figure of 3,000 to 4,000 fish in the Big Sur River in,  
21 quote, the early years?

22 HEARING OFFICER DODUC: Mr. Cunningham, go ahead,  
23 answer it.

24 MR. CUNNINGHAM: Well, simply based on the  
25 numbers back. I'm not a professor. But when you can go

1 down to the lagoon in the earlier years and see, we'll  
2 say, anywhere from 50 to 100 fish at one time on one day,  
3 legal fishing day, harvest anywhere from 20 to 30 of those  
4 fish and go ditch that limit and then go back upstream and  
5 catch more fish, the numbers simply add up. Over a  
6 hundred fish -- I've seen -- I had days on the Big Sur  
7 where I've observed between the lagoon and as far as you  
8 could fish over 300 fish. So I'm thinking to myself, if  
9 we can only see these fish 30 hours a week out of a  
10 possible 192, so my mind extrapolates if I can see a  
11 hundred -- or over a hundred in one day and we can harvest  
12 30 between this group, how many hundreds more must be out  
13 there or come in during the nighttime when we're not  
14 there.

15 HEARING OFFICER DODUC: So the answer is it's  
16 your estimates based on your knowledge, experience, and  
17 your equations, not on any other facts or studies --

18 MR. CUNNINGHAM: Well, no. It would be a study  
19 as far as I'm concerned. However, the Board would not  
20 consider a study. But between myself and my friends and  
21 talking about -- mostly about numbers, which is what we're  
22 always after, numbers, it was pretty clear and it was  
23 apparent in the one day the group of 15 to 20 guys would  
24 harvest X number of fish, you had a pretty good idea of  
25 what that number was.

1 HEARING OFFICER DODUC: But no one sat down and  
2 did the calculation and put it into the record book?

3 MR. CUNNINGHAM: No.

4 HEARING OFFICER DODUC: Okay.

5 BOARD MEMBER HOPPIN: Is there a chance you may  
6 have taken a significant number of the fish that were in  
7 that river? I mean it's one thing to be a good fisherman.  
8 But it sounds like you're an extra good fisherman and  
9 maybe your friends were as well. I mean could that be a  
10 factor?

11 MR. CUNNINGHAM: May I correct the Board member?

12 BOARD MEMBER HOPPIN: Beg your pardon?

13 MR. CUNNINGHAM: May I correct you?

14 BOARD MEMBER HOPPIN: You bet.

15 MR. CUNNINGHAM: I was a hell of a snagger.

16 BOARD MEMBER HOPPIN: I was thinking for a while  
17 you were using those Dupont spinners out there that had  
18 the three-inch fuse on them. I wasn't sure.

19 (Laughter.)

20 HEARING OFFICER DODUC: Okay. We're using up Ms.  
21 Goldsmith's time.

22 Please continue.

23 MS. GOLDSMITH: I'm very curious about this  
24 CRSA-22 and also 23.

25 BY MS. GOLDSMITH:

1 Q I notice that you say that the most steelhead you saw  
2 in one day was 200.

3 A If you'll excuse me. I have obvious hearing problems  
4 So if you --

5 Q In the last column it reports that the most steelhead  
6 you saw in a single day was 200; is that right?

7 And that's basically how you arrived at your  
8 3,000 to 4,000 estimate of fish in the earlier years?

9 A No, not necessarily, because it was -- in those days  
10 it wasn't uncommon to be able to count 200 fish over --  
11 when you had what we called the legal fishing part of the  
12 river, which is about eight miles. We didn't necessarily  
13 stay put in one position because there was fish all up and  
14 down the river.

15 Q Now, you also and most everyone else reports that  
16 there were kelts in the river all year.

17 How do you know they were there all year? Were  
18 you there all year?

19 A I was there approximately from -- let's see. We  
20 started in May. But we found out that that was all there  
21 were, were small kelts. That wasn't what we were after.  
22 Those were considered trout, leave them alone.

23 So we kept going up in the months until we  
24 finally hit August and started seeing those - and I'll  
25 call them adult steelhead - about pound and a half to six

1 pounds.

2 Q Aren't kelts adult steelhead?

3 A Well, you might be -- excuse me, but I'm not a  
4 biologist. But --

5 Q But you reported that you saw kelts all year in the  
6 river.

7 A Yes, I did. And I did see them.

8 MR. LE NEVE: May I clarify something?

9 BOARD MEMBER HOPPIN: I want to ask Mr.  
10 Cunningham a clarifying question.

11 You and I aren't -- neither of us are biologists.  
12 What I think everyone is referring to as a kelt is what  
13 you and I might refer to as a downer. It's all the same,  
14 isn't it? A fish that spawned and headed back to the  
15 ocean?

16 MR. CUNNINGHAM: Not really.

17 MR. LE NEVE: Yes, that's what the question I  
18 actually asked was, because most people do not know the  
19 word "kelt". So I asked them how many spent fish, how  
20 many hangovers, how many downrunners, how many spawned-out  
21 fish they'd sell. I used the word "kelt" at this table,  
22 although most the people answered to how many spent fish  
23 or how many downstream fish they saw.

24 BOARD MEMBER HOPPIN: So kelt or downer or spent  
25 fish are all --

1 MR. LE NEVE: Spent fish is a fish that spawned  
2 and is heading back to the ocean.

3 BOARD MEMBER HOPPIN: Thank you.

4 MS. GOLDSMITH: And those are reported to have  
5 been seen all year, Mr. LeNeve

6 MR. CUNNINGHAM: Yes, definitely.

7 MS GOLDSMITH: Mr. LeNeve?

8 MR. LE NEVE: Quite a few people did. I saw  
9 kelts -- no, I didn't see kelt every single month of the  
10 year because I wasn't there every month of the year. But  
11 If you see a kelt in September or in October, he had to  
12 have been there June, July, and August.

13 MS. GOLDSMITH: Now --

14 MR. CUNNINGHAM: Either that or we have fresh  
15 fish coming up the river in June, July, and August, which  
16 would be even worse.

17 MS. GOLDSMITH: Now, I have a question about the  
18 column that's labeled "How many fish were in the Big Sur  
19 River in early years?" What years are you counting the  
20 early years?

21 MR. LE NEVE: Who are you directing that question  
22 to?

23 MS. GOLDSMITH: To you, Mr. LeNeve. This is  
24 your --

25 MR. LE NEVE: I call the early years from '58 --

1 I got a driver's license in 1958. At that point in time  
2 my fishing kicked up. I was in a serious accident in '76.  
3 So the earlier years to me is '58 to '76.

4 BY MS. GOLDSMITH: (Mr. LeNeve)

5 Q Thank you.

6 Are any of the folks on your list qualified as  
7 fishery biologists by education?

8 A No.

9 Q Now, as to the letters that you have offered, you  
10 don't know what years many of those accounts were related  
11 to or what months?

12 A Not from the letters but I do from my follow-up  
13 interviews.

14 Q That information is not in the record, is it?

15 A In the range here on my follow-up here, if you look at  
16 the first column to the left, it shows either "L" or "I".  
17 "L" stands for letter, "I" stands for the follow-up  
18 interview. So when the letter came in and it didn't give  
19 me the complete answers, I followed up with an interview.

20 Q But neither the letters nor your table indicate when  
21 these fish were caught that are indicated in the letters.

22 A It was in the period between 1958 and 1976 is what I  
23 asked the people to comment on.

24 Q Now, the other -- the next column that is interesting  
25 in here is you asked your respondents what percentage have

1 the numbers dropped since 1958. And there's quite a few  
2 responses.

3 Do you have any idea what's the basis for those  
4 responses?

5 A Personal observations.

6 Q Did they count the fish?

7 A That's always been the problem. No one has been able  
8 to count the fish. It's impossible. The only thing you  
9 can go by is anecdotal evidence.

10 Q My question -- if you'll indulge me, Madam Chair.

11 You have these other streams that you have -- I'm  
12 not going to ask you about the Carmel. You've covered  
13 that in discussions with Mr. Dettman. But you have  
14 presented the CRSA-12, CRSA-13 and CRSA-14, which purport  
15 to be studies of population and smolt-to-adult survivals  
16 in other streams. Are you personally familiar with those  
17 streams?

18 A No.

19 Q So you can't tell me whether or not the  
20 characteristics are similar to those of the Big Sur?

21 A No, I cannot.

22 Q I also looked at CRSA 13, and I note that in the years  
23 from, oh, say, '78 through at least 1997, and there are  
24 two good years, and 1999 was another bad year, that these  
25 smolt-to-adult survival rates tended to drop and stay

1 relatively low. Do you see that?

2 A Yes, I do.

3 Q Do you have any idea what that is attributable to?

4 A No, I don't.

5 Q Could that be attributable to conditions in the ocean?

6 A Yes, it could.

7 MS. GOLDSMITH: I believe those are all the  
8 questions I have.

9 HEARING OFFICER DODUC: Thank you.

10 Any questions from the staff?

11 At this time do you wish to move your exhibits  
12 into evidence?

13 MR. LAZAR: Yes, I do.

14 MS. GOLDSMITH: And my objections remain. I  
15 believe that CRSA 12, 13 and 14, which deal with creeks  
16 that are other than Big Sur, as to which the  
17 characteristics are uncertain, are irrelevant to this  
18 consideration. I believe that there is no adequate  
19 foundation. And I'm not saying that the letters are  
20 inauthentic. What I'm saying is they're hearsay and we  
21 can't tell anything from them. There's lack of foundation  
22 and they are hearsay and should not be admitted. And I  
23 also think that CRSA 17 lacks relevance.

24 HEARING OFFICER DODUC: Thank you.

25 Any other objections?

1 All right. Ms. Goldsmith's objections are noted  
2 and will be considered in weighing the evidence. But we  
3 will accept all of the exhibits into evidence.

4 (Whereupon unidentified exhibits were  
5 admitted into evidence.)

6 HEARING OFFICER DODUC: Thank you very much.

7 Anything else, Mr. Lazar?

8 Mr. Johnson.

9 While Mr. Johnson is coming up, let me confirm.  
10 Has everyone provided to all parties copies of their  
11 rebuttal exhibits?

12 MS. GOLDSMITH: Are we going to have more  
13 testimony from Mr. Cunningham?

14 HEARING OFFICER DODUC: Mr. Johnson.

15 MR. JOHNSON: All I want to do is -- we covered  
16 his remarks in the table. I don't know if we covered his  
17 factual statements in his policy statement. And so I  
18 would like to ask him.

19 HEARING OFFICER DODUC: Mr. Lazar.

20 MR. LAZAR: I had a question regarding your  
21 question about rebuttal exhibits. I assume you're  
22 referring to rebuttal exhibits that have already been  
23 circulated or reviewed?

24 HEARING OFFICER DODUC: I want to make sure that  
25 for those who will be presenting rebuttal witnesses on

1 Monday, that they have provided those exhibits to all the  
2 parties so that all the parties may have them over the  
3 weekend.

4 MR. LAZAR: Well, we would like to provide the  
5 same opportunity for evidence and other parties to review  
6 our rebuttal testimony as we were provided today. That is  
7 to say we would like to provide them before the hearing on  
8 Monday.

9 HEARING OFFICER DODUC: That's very nice of you  
10 to make that request. But I am requesting that you  
11 provide them today. And I said so earlier in the hearing  
12 today that that was my expectation.

13 MR. LAZAR: Right. So part of our rebuttal could  
14 be that we would be interested in replying to testimony  
15 that was provided today.

16 HEARING OFFICER DODUC: Your rebuttals are  
17 rebuttals to the direct testimony that was presented by  
18 the other parties.

19 MR. LAZAR: Ms. Chairperson Doduc, we haven't had  
20 the opportunity to review the applicant's testimony today  
21 that was provided for more than a couple of minutes.

22 HEARING OFFICER DODUC: Those testimonies were  
23 provided on rebuttals, not on direct.

24 MR. LAZAR: No, I understand.

25 HEARING OFFICER DODUC: I expect your rebuttal

1 witnesses to rebut the direct testimonies that were  
2 presented over the course of the last three days.

3 MR. LAZAR: We're requesting a fair playing  
4 field, given that the rebuttal testimony provided today we  
5 had about ten minutes to review.

6 HEARING OFFICER DODUC: Mr. Lazar, what you're  
7 asking for is to rebut the rebuttal witnesses from today.  
8 If I grant you that request, I would have to grant El Sur  
9 Ranch the opportunity to rebut your rebuttal witnesses,  
10 and that is not going to happen.

11 MR. LAZAR: Ms. Doduc, let me restate then. We  
12 just want to provide the applicant with the same  
13 opportunity to review our rebuttal testimony as they  
14 provided us to review theirs. Even if we don't change it,  
15 the fact is we were provided ten minutes today to review  
16 their rebuttal testimony. It doesn't seem like it's  
17 giving us a fair shake to provide them with the entire  
18 weekend to review our rebuttal testimony.

19 HEARING OFFICER DODUC: But you also received  
20 rebuttal exhibits from three other witnesses to prepare  
21 yourself for over the weekend as well.

22 Ms. Lazar, I appreciate your concerns but my  
23 decision stands. Parties will provide all exhibits for  
24 all their rebuttal witnesses today.

25 MR. LAZAR: Thank you, Chairperson.

1 HEARING OFFICER DODUC: Mr. Johnson, you may  
2 proceed.

3 MR. JOHNSON: Thank you. My name is Brian  
4 Johnson and I'm with Trout Unlimited.

5 And I apologize. This is messier than I could  
6 have done. I had planned to call Mr. Cunningham as a  
7 rebuttal witness on my own and didn't coordinate as well  
8 as maybe we could have.

9 REBUTTAL CROSS EXAMINATION

10 BY MR. JOHNSON:

11 So all I want to do is clean up the statements in  
12 the personal statement, which was E mailed around to all  
13 of the parties yesterday. And I just want to confirm that  
14 you wrote that.

15 A I did.

16 Q And it was based on your personal experience?

17 A Yes.

18 Q And that it's true?

19 A It is true.

20 MR. JOHNSON: And I'd like to move it into  
21 evidence as TU-9 - strike the word "Policy" - "Jim  
22 Cunningham's Statement" at the top - and move it into  
23 evidence. Or leave it as a policy. I don't particularly  
24 care. But the factual statement in it he's adopting as  
25 his testimony, and I'd like to have the record show that.

1 HEARING OFFICER DODUC: Thank you, Mr. Johnson,  
2 for this curveball so late in the game.

3 Let's go ahead -- if that concludes your  
4 rebuttal, let's go ahead and open it up for cross. And  
5 we'll proceed from there.

6 Any cross?

7 Fish and Game, no.

8 Mr. Lazar?

9 No.

10 LeNeve?

11 No.

12 Ms. Goldsmith.

13 MS. GOLDSMITH: No, I believe I covered it in the  
14 last go-around.

15 HEARING OFFICER DODUC: Any objections then to  
16 Mr. Johnson's request?

17 MS. GOLDSMITH: I have no objection.

18 HEARING OFFICER DODUC: All right. And with  
19 that, then we will move your policy statement into  
20 evidence.

21 MR. JOHNSON: Not to drag this out. But if it's  
22 mine, it will be TU-9. It might be clearer for people  
23 reading the record to call it CRSA-24 since he was mostly  
24 with them. But that would require some more procedural  
25 wrangling. So if it's TU-9, that's fine with me.

1 HEARING OFFICER DODUC: No, you make the motion,  
2 you make the request, you adopt the rebuttal. It's going  
3 to be your exhibit, Mr. Johnson.

4 (Whereupon Exhibit TU-9 was admitted  
5 into evidence.)

6 HEARING OFFICER DODUC: Let me ask Ms. Mahaney  
7 and staff, any other procedural issues we need to address  
8 today?

9 SENIOR STAFF COUNSEL MAHANEY: What time would  
10 you like to start on Monday?

11 HEARING OFFICER DODUC: I'm not even a morning  
12 person.

13 Let's go ahead and start again at 8:30. Plan on  
14 a 30-minute lunch and plan on staying this time on Monday  
15 until we are complete. There will not be another day of  
16 hearing. All right?

17 Thank you, all.

18 STAFF GEOLOGIST MURPHEY: Oh, I just want to  
19 remind everybody, any new exhibits, please provide those  
20 to us.

21 MS. TEETERS: Pardon me. If I could, I just have  
22 one procedural question. You want us to hand out the  
23 exhibits for the rebuttal witnesses that we're going to  
24 have on Monday. Did you want us to assign exhibit numbers  
25 or just give them the exhibits?

1 HEARING OFFICER DODUC: Just give it to them for  
2 now.

3 MS. TEETERS: Thank you.

4 (Thereupon the hearing recessed at 5:49 p.m.)  
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CERTIFICATE OF REPORTER

I, TIFFANY C. KRAFT, a Certified Shorthand Reporter of the State of California, and Registered Professional Reporter, do hereby certify:

That I am a disinterested person herein; that the foregoing hearing was reported in shorthand by me, Tiffany C. Kraft, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this 25th day of July, 2011.

---

TIFFANY C. KRAFT, CSR, RPR  
Certified Shorthand Reporter  
License No. 12277